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AUTHOR	Hamilton, James B.
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ABSTRACT

Regional seminars were held to assess the ideas presented in the report, sponsored by the National Academy of Sciences, entitled "Education for Tomorrow's Jobs" and to record ways to improve the quality of vocational education. The organizers of the seminars invited knowledgeable experts in the field to discuss ways to improve vocational education and to generate activities that would make vocational education an equal partner with academic education in the education systems as a whole. Concerns were voiced regarding the issues of enhancing excellence in education, strengthening the teaching staff, improving access to vocational education, and strengthening financial support for vocational education. The following were among the strategies identified to deal with these concerns: required and supported business and industry internships for vocational teachers, establishment of incentives such as career ladders to attract and retain qualified teachers, establishment of state collaboration councils to promote voluntary sharing of resources, establishment of employment insurance as a companion with unemployment insurance, modification of high school graduation requirements from a course basis to a competency basis, and development of tax incentives to business and industry for student and teacher internships. (Appended to this report are a seminar schedule and agenda as well as the texts of remarks made by T. H. Bell and Robert M. Worthington of the U.S. Department of Education concerning the aforementioned report.) (MN)

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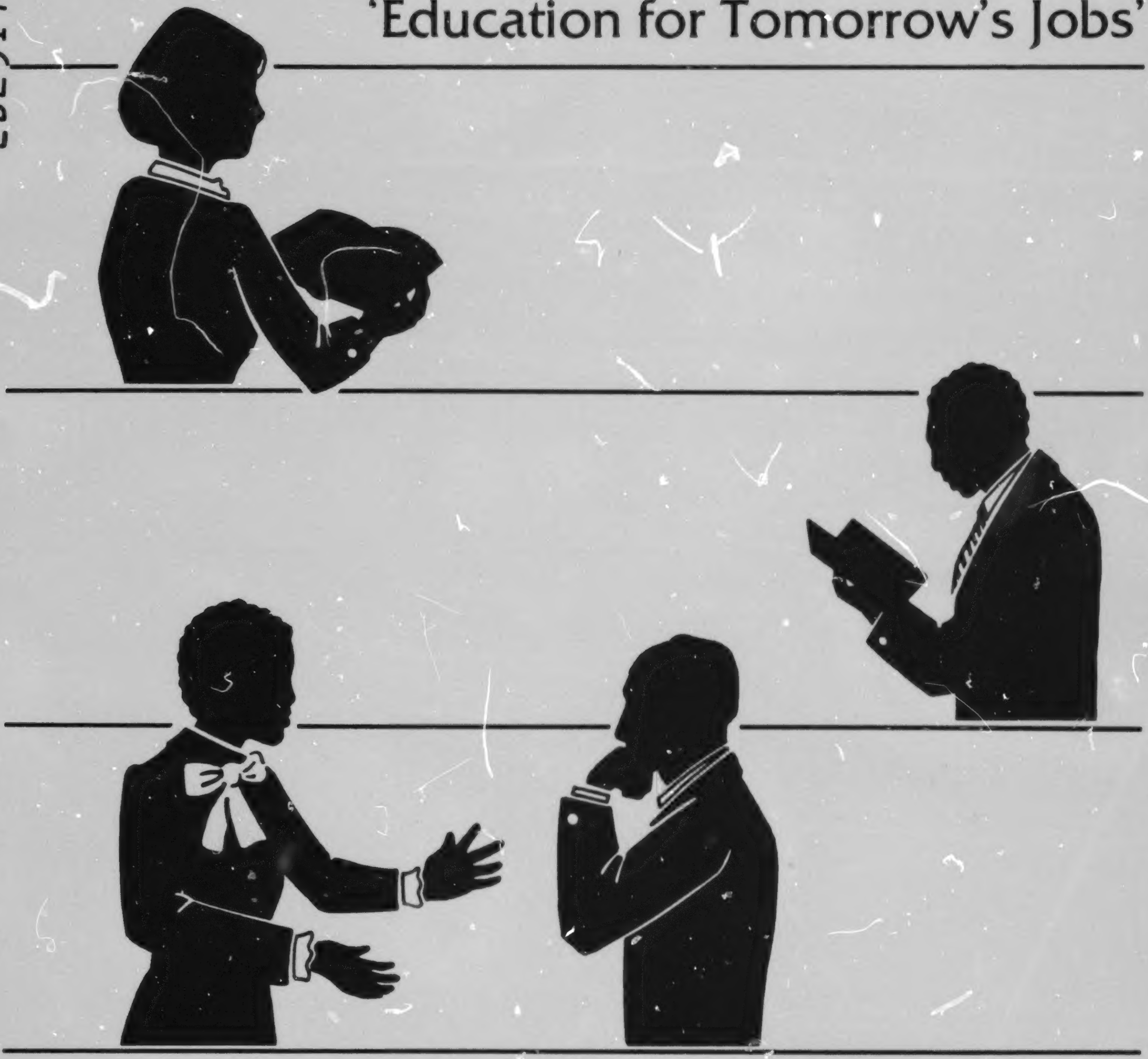
The Public Reacts to 'Education for Tomorrow's Jobs'



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THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

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For further information contact:

Program Information Office
National Center for Research
in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

Telephone: (614) 486-3655 or (800) 848-4815
Cable: CTVOCEDOSU/Columbus, Ohio
Telex: 8104821894

THE PUBLIC REACTS TO EDUCATION FOR TOMORROW'S JOBS

James B. Hamilton

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

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FORWORD

The National Academy of Sciences' report is an excellent study which has the potential to be a landmark study for vocational education, if all of us--educators and representives of the private sector, alike--pursue its recommendations with vigor and determination. Vocational education is an important and integral part of our educational system. On June 29, 1983, President Reagan emphasized the importance of vocational education in his speech at the Vocational Industrial Clubs of America's National Skills Olympics in Louisville, Kentucky. The President stated that:

> We should see that all our young people get a grounding in English and literature, history, math, science, and other basics. But we must also recognize that our vocational classrooms are just as important as any other. And we should insist that the vocational courses we teach prepare this generation with the skills they need for real jobs.

The quality, relevance, and effectiveness of vocational education programs are important if we are to serve well the more than 17 million persons who participate in these programs. In addition, it is imperative to plan, develop, and maintain quality vocational education programs if our Nation is to equip its citizens with the job skills necessary to recapture its preeminent position in the worldwide economy.

This administration believes that vocational education is an important part of both education and training for employment. We believe it is essential for the Nation; that it is working, and we support it. That is why one of the Department's top priorities is to make full use of the work accomplished by the National Academy of Sciences on behalf of vocational education. As part of this effort, we sponsored, with the help of many national organizations, a series of 10 regional seminars around the country so educators, representatives from the private sector, and interested citizens could gather to dialogue on the important issues in the report such as teaching, finance, access, and private sector collaboration and develop strategies and plans of action which could be implemented at the State and local levels.

This summary of the discussions held at these ten regional seminars should be thought provoking, a challenge for improving our Nation's vocational education programs, and a practical springboard to implement effective and constructive changes which will benefit all of our vocational students, and ultimately, our Nation.

T. H. Bell
Secretary
U.S. Department of Education

PREFACE

In 1981, the Department of Education awarded a contract to the National Academy of Sciences to examine vocational education's role in economic development, particularly in depressed urban and rural areas. Since collaboration with the private sector has always been a key component of quality vocational education programs, another special emphasis of the study was to determine the characteristics of successful collaborative efforts among vocational education, business, industry, and labor, and to "bring a new perspective" to these efforts.

The National Academy of Sciences assembled a distinguished group of scholars and leaders in Business, industry, labor, and education as the study committee. In September of 1983, the committee completed its work and met with Secretary Bell to present its report, Education for Tomorrow's Jobs. During this meeting, Secretary Bell asked my office and the National Academy of Sciences to hold a national seminar in Washington to examine the report and recommend ways to improve the quality of vocational education. Following the national seminar, our office conducted 10 regional seminars across the nation focusing on Education for Tomorrow's Jobs. These seminars were designed to focus on the report and recommend ways to improve the quality of vocational education.

The ten regional seminars were made possible by the collaboration of many national organizations and their State and local counterparts. Among the cooperating organizations were the following: The National Association of State Directors for Vocational Education, The State Advisory Councils for Vocational Education, and our own Regional Offices. The organizers of these seminars invited knowledgeable experts in the field to discuss ways to improve vocational education and generate activities that will make vocational education, in the words of the NAS Study Committee, "an equal partner with academic education in the education system as a whole."

We hope that this report, which analyzes and synthesizes the outcomes of the regional seminars, will be useful in the quest for excellence in vocational education. The quest for excellence is not, and should not be, confined to the walls of college preparatory schools and universities. It must also be found in the vocational education classrooms, labs, and cooperative education worksites where students learn the knowledge, skills, and attitudes they need to be successful employees in a whole host of occupations. Commendations are in order for each organization involved in the planning and conduct of these seminars.

Robert M. Worthington, Ph.D.
Assistant Secretary
for Vocational and Adult Education

PROLOGUE

This document is the result of the efforts of the National Center for Research in Vocational Education to capture and record the essence of the 10 regional seminars focusing on Education for Tomorrows Jobs. The effort included training and coordinating the work of recorders who documented panel presentations and recorded the reactions, ideas, and strategies voiced in each discussion group of the 10 regional seminars. This input was then summarized, analyzed, organized, and presented in the form of this report.

Staff of the National Center's Personnel Development and Field Services Division under the direction of Dr. Lucille Campbell-Thrane and the coordination of Dr. James B. Hamilton, Senior Research and Development Specialist, trained recorders and coordinated the recording at each of the seminars. Recognition is due Michael E. Wonacott, Program Associate, for preparation of guidelines and assistance in training recorders for the seminars. Appreciation is extended to Dr. Barbara Kline, Dr. Robert Norton, Dr. Judith Samuelson, Dr. Jay Smink, and Dr. Thrane who each coordinated National Center responsibilities at one or more of the seminars.

Special recognition is accorded Dr. Hamilton for the summary and analysis of all the input data from the seminars and for writing the report. Appreciation is extended to Patricia Agner who performed the word processing and to Judy Balogh and Janet Kiplinger for editing.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

CHAPTER I

BACKGROUND AND PURPOSE OF THE REGIONAL SEMINARS

Introduction

During the months of March and April 1984, the U.S. Department of Education held a series of 10 regional seminars based on the National Academy of Sciences (NAS) report Education for Tomorrow's Jobs. The overall purpose of these seminars, which were called by U.S. Secretary of Education, T.H. Bell, was to bring together educators, members of the private sector, and State and local government officials to pursue with vigor and determination the Academy's recommendations for vocational education.

The National Academy of Sciences Report

Purpose of the NAS Study

In October 1981, the U.S. Department of Education asked the National Academy of Sciences to "undertake a study of collaborative efforts among business, industry, and community-based organizations and the public sector in the vocational education of residents, particularly minority residents, of economically depressed areas." The Committee of Vocational Education and Economic Development in Depressed Areas, a study panel, was established to carry out the charge from the Department. The panel members were urged "to bring new perspective to the relationships among vocational education, economic development, and the private sector."

The report, published as a result of the committee's work, Education for Tomorrow's Jobs, addresses the following issues:

- Youth employment in a changing economy
- Education and training for employment
- Vocational education and the private sector
- Strengthening vocational education

Major Conclusions of the Study

In their report the panel presented conclusions regarding each of these topics. The major ideas of each of these conclusions are presented via excerpts from concluding statements in the report.

Youth employment in a changing economy. The panel concluded that

> the lack of appropriate habits, attitudes, and requisite skills--both basic and job-related--contributes to the problem of securing jobs for both young and displaced workers. Public schools across the country can help in solving the problem, but only if they offer strong grounding for all students in basic skills and up-to-date occupational skills. All students, whether they plan to work immediately after high school graduation or not, should be prepared to enroll in education or training programs as necessary throughout their lives in order to update their job skills.

Education and training for employment. The panel identified mastery of basic educational skill and basic occupational skills, exposure to a variety of occupations, development of appropriate work habits, and participation in a well supervised work experience that is closely related to the school studies, as being important for vocational education students. Further, for students who are lacking in basic skills and appropriate work habits, it is difficult to gain admission to the effective vocational education programs. They stated that

> fundamental changes are needed to improve some vocational education programs to a significant degree. Those programs generally regarded as most in need of improvement are often in public comprehensive high schools and it is there that we concentrate our attention. We believe that those programs could be improved dramatically by strengthening the teaching staff and by increasing the flexibility of funding arrangements.

Vocational education and the private sector. The panel saw a wide variety of opportunities and types of activities in which business and schools can collaborate to provide quality vocational education for students. They recognized the need for collaborative arrangements that allow response and adaptation to changes in the economy and in specific local conditions. The panel recognized, too, that vocational education programs and collaborative efforts can be positively influenced by Federal and State laws and regulations regarding vocational teacher certification and corporate taxes.

Strengthening vocational education. Regarding the vocational education system the panel concluded as follows:

> We firmly believe that it is the responsibility of the public education system to prepare students for both employment and further education. . . . We believe that some important and fundamental changes need to be made in the vocational

> education system if it is to do its job effectively. Probably the most important of those changes are intended to strengthen the teaching and financing of vocational education.

The panel felt that in the education system as a whole, vocational education should be an equal partner with college preparatory education. They noted, however, that this would be "virtually impossible to legislate or institute." Concerning equal partners with college preparatory programs the panel observed that

> The most effective vocational programs are deserving of that respect now, and we would like to see all programs raised to that level of quality and esteem.

Recommendations of the NAS Study Panel

The 14 recommendations made by the panel were directed toward the education and training of youth who will be just embarking on their employment careers. Background discussion was presented and recommendations were made regarding six areas of concern of the panel. For a complete discussion of the background and recommendations, the reader is referred to chapter 4 of the panel's report, Education for Tomorrow's Jobs.

Following are the six areas of concern of the panel, with excerpts concerning their recommendations.

- Collaborative Efforts
  - Collaboration with employers. Mechanisms and incentives should be established to induce educators and employers to work together in the planning and provision of occupational education and training.

- Coordination of vocational education and employment training. There should be as much overlap as feasible in membership on local vocational education councils and private industry councils and on the State vocational education advisory committees and the State coordinating councils required by the Job Training Partnership Act.

- Supervised Work Experience for Students

  - Competency-based work experience programs. Unions, educators and employers should work to change the requirements for the completion of cooperative education and apprenticeship programs; they should be based on competence rather than time.

  - Apprenticeship programs. The Office of Vocational and Adult Education in the U.S. Department of Education should work with the Federal Committee on Apprenticeship and the Bureau of Apprenticeship Training in the U.S. Department of Labor to revise the criteria for completion of apprenticeship programs. Completion should be based on competence rather than the period of participation in the programs.

- Strengthening Teaching

  - Certification of teachers. Certification should be based on judged competence in both teaching and the relevant occupation rather than on completion of a bachelor's degree in teacher education.

  - Training of teachers. Teacher training institutions should develop, in addition to the standard curriculum, special curricula for people who have gained most of their occupational knowledge and experience through employment and not in college.

  - Inservice training of teachers. Effectiveness in teaching should be stressed for those teachers (most often those who have learned their occupational skills in industry) who have little experience in teaching. Internships in business should be made available on a regular basis so that all vocational education teachers can periodically sharpen their occupational skills and knowledge.

  - Part-time vocational education teachers. Once certification requirements are changed appropriately, high school administrators should take advantage of opportunities to hire part-time teachers for vocational education programs.

- -- Pay scales for teachers. Pay scales that reward excellence of individual teachers and permit differentiation by field should be instituted wherever possible.

o Strengthening Financing

- -- Funding formulas. In addition to enrollment figures, vocational education funding formulas should include factors that reflect determinants of cost, such as the educational disadvantage of students (requiring remediation), the cost of capital equipment, the salaries of teachers and administrators, curriculum revision, and the like.

- -- Pooling equipment. Statewide and regional pools of expensive equipment that reasonably can be shared should be established. Opportunities for leasing equipment . . . should be investigated. Similarly, opportunities for borrowing equipment from business should be sought.

- -- Funding for program improvement. They (public schools) should have sufficient resources not only to maintain the good programs they have now but also to modify existing programs and initiate new ones to teach the skills required by employers. They will also need additional money to provide remediation for educationally disadvantaged students.

o Improving Access to Vocational Education Programs

- -- Vocational Incentive Grants. The Federal Government should initiate a substantial experiment in vocational incentive grants for high school vocational education students.

- -- Consumer protection in vocational education. All training institutions that accept vocational incentive grants or that receive Vocational Education Act funds should be required to provide to any interested party detailed descriptions of their programs, including courses offered, skills taught, requirements for enrollment, and opportunities for work experience as well as written evaluations of each of their programs.

The Ten Regional Seminars

In November 1983, a National Forum was held in Washington D.C., to examine the National Academy of Sciences report and to consider its recommendations. Participants in the National Forum responded very favorably to Secretary Bell's inquiry regarding the appropriateness of regional seminars. In an effort to promote the dissemination, discussion, analysis, and implementation of the recommendations of the National Academy of Sciences report, Secretary Bell directed Dr. Worthington to conduct a series of 10 regional seminars. Each of the 10 regional seminars (1 in each U.S. Department of Education region) focused attention on the findings and recommendations contained in Education for Tomorrow's Jobs. A schedule of locations and dates of each of the seminars is shown in appendix A.

The major purposes of the seminars were as follows:

- Convene influential State and local individuals who can suggest strategies that might best implement the report's finding and recommendations.
- Examine the current context of vocational education as it is being affected by this and other National education reports.
- Compile a summary of suggested implementation strategies for use at State and local levels from each regional seminar for national dissemination.
- Encourage State and local leaders to plan and conduct follow-up seminars in their home States.

Seminar Planning and Responsibilities

Basic planning of the seminar program and agenda was done by staff of the Office of Vocational and Adult Education, U.S.

Department of Education, under the direction of Assistant Secretary Robert M. Worthington. Development, implementation and execution of the plans at each of the regional sites were activities generally shared by the regional vice-presidents of the National Association of State Directors of Vocational Education and the Department of Education Secretary's regional representatives.

The regional vice-presidents were assisted by each of the other State directors of vocational education in their region in identifying appropriate individuals to be invited to the seminar held in the region.

Once each region had identified appropriate potential seminar participants, individual letters of invitation to the regional seminar were sent by Secretary Bell. A number of cooperating National organizations assisted in promoting participation in the seminars among their constituencies.

Four agencies shared responsibilities in the conduct of each of the regional seminars. In general, the regional vice-presidents were responsible for deciding upon invitees, planning and coordinating the specific program agenda, securing reactions from panel members, and identifying discussion group leaders and recorders. The Secretary's regional representatives arranged for physical facilities, equipment, registration, and luncheons. The Office of Vocational and Adult Education (OVAE) was responsible for overall program planning and coordination, including preparation of videotape presentations by members of the NAS panel and by Secretary Bell (see appendix D for a transcription of Secretary Bell's presentation). The National Center for Research in Vocational Education developed a display of materials and a paper* related to the panel's recommendations, trained and coordinated seminar recorders, and summarized the outcome of the seminars.

Seminar Participants

A summary of participation in the 10 regional seminars by type of agency or role of the participant is shown in table 1. As one might anticipate, vocational educators, who had a direct, full-time interest in vocational education accounted for a large percentage of total seminar participants. Local administrators topped the list, with State department of education representatives next in number. Classification of participants was made by title and institution or agency name and address. Although it was not possible to differentiate clearly between secondary and postsecondary schools by name only, attempts to do so indicated an approximate ratio of two or three secondary school administrators to one postsecondary administrator.

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* The title of this paper is "National Center for Research in Vocational Education Products and Activities Related to the Recommendations Made in the National Academy of Sciences Report, Education for Tomorrows Jobs." Readers may contact the National Center for Reserch in Vocational Education, The Ohio State University, to obtain a copy of this paper.

Table 1

SUMMARY OF PARTICIPATION IN TEN REGIONAL SEMINARS ON EDUCATION FOR TOMORROW'S JOBS

USED REGIONS

	I	II	III	IV	V	VI	VII	VIII	IX	X	
Advisory council	3	1	11	6	3	-	5	7	6	7	49
Business-industry	2	4	3	6	9	3	3	3	1	7	41
Education association	1	8	3	9	6	2	5	6	3	7	50
Federal agency	5	2	21	6	5	5	5	7	4	3	63
Local administrator	29	14	17	67	17	18	25	41	26	21	275
Local board of education	1	-	3	-	-	-	-	3	-	1	8
Labor	2	3	1	3	2	-	-	1	-	-	12
Local school	5	9	16	24	10	10	43	16	23	2	158
Proprietary school	3	5	2	-	-	1	-	-	-	-	11
Student	-	1	1	-	3	-	-	-	-	9	14
Other State agency	1	8	3	6	16	3	-	7	3	12	59
State board of education	-	-	-	1	3	-	-	-	1	-	5
State department	9	16	10	26	25	29	14	30	21	28	208
State legislator	-	-	1	-	-	1	1	1	2	2	8
Teacher	1	-	-	2	1	-	-	2	1	-	7
Teacher educator	4	1	5	6	15	8	13	12	6	2	72
Unclassified	1	-	26	12	4	18	15	8	29	10	123
	67	72	123	174	119	98	129	144	126	111	1,163

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Individuals classified as "local school" representatives most often were associated with a secondary or postsecondary school address; however, they had not given their titles when registering. Some also were guidance counselors, placement coordinators, curriculum specialists, and so forth. The low number of participants registered as teachers may be due to many teachers having given only their name and school when registering rather than specifying that they were teachers or instructors. Likewise, some of these individuals may have been department or program chairpersons.

Participants shown as "unclassified" had registered giving only their name or name and address with no title, agency, or institution indicated.

The Seminar Program

A suggested agenda, appendix B, was developed and shared with each region for use in planning and conduct of the 1-day seminar. Each region then prepared program agendas to incorporate the major activities in the setting. There were major program commonalities across all 10 seminars. Assistant Secretary Worthington or his representative gave a presentation regarding the purposes of the seminar and introduced videotaped presentations by members of the National Academy of Sciences and by U.S. Secretary Bell. A transcript of Assistant Secretary Worthington's presentation is included in appendix E. The content of these and other presentations will be discussed in chapter 2.

The videotaped presentation by members of the National Academy of Sciences study panel featured discussions of their report with David A. Geisler, Executive Director, National Research Council Commission on Behavioral and Social Sciences and Education and with Assistant Secretary Worthington. Participating panel members were Colin C. Blaydon (Chair), William A. Morrill (Vice Chair), Paul E. Peterson, and Susan W. Sherman, Study Director. Panel members Colin Blaydon, George Quarles, and Francis Tuttle each participated in one or more of the regional seminars.

Generally, the two videotaped presentations were followed by comments from two reactors, one representing the private sector and another representing the State legislature. Some regions had different representation and still others had formal presentations. In several of the seminars, participants were afforded opportunity to question the reactors. In such cases, reactors comments and responses were recorded and are summarized in chapter 2.

The major activity of the afternoon sessions included breakout group discussions. These group discussions focused on issues and strategies relative to implementing recommendations made by the study panel. To enhance the discussions, OVAE staff developed sets of discussion questions pertaining to excellence in vocational education, strengthening vocational teaching, improving access to vocational education programs, and strengthening financing. The numbers of breakout groups at the seminars ranged from 3 to as many as 12. A discussion leader and recorder for each breakout group were appointed prior to the seminar to lead and record the discussion. The questions and summaries of the discussions are presented in chapter 3 of this report.

Breakout group discussion questions also focused on current reform issues and State and local strategies regarding strengthening teaching, improving access, and strengthening finance. These questions and discussion summaries are presented in chapter 4.

Written recordings of reactor panel comments and breakout discussions provided the major source of input for the content of this report. Recorders for each of the regional seminars were provided training for this role by the National Center prior to the seminar sessions. A listing of individuals who served as recorders for the seminars is found in appendix C.

CHAPTER II

COLLABORATION

If one word were to be chosen to characterize the regional seminars in terms of focus of presentations, central theme of issues discussed, the area of greatest agreement, and key elements of strategies proffered, that term would have to be "collaboration." The recommendations of the National Academy of Sciences committee proposed a number of collaborative relationships and actions directed toward improvement of the vocational education enterprise. Such emphasis upon collaborative approaches might rightly have been anticipated as the committee's charge was "to undertake a study of collaborative efforts among business, industry, and community-based organizations and the public sector in the vocational education of residents." Subsequently, an entire chapter of the report was devoted to vocational education collaboration with the private sector. The committee's recognition of the need for collaboration carried into the areas of teacher training, student access, and finance. The need was recognized for education to collaborate with concerned groups and agencies in addition to business and industry.

The manner in which the topic of collaboration was addressed in the 10 regional seminars might best be described as an infusion throughout the program rather than a presentation topic or a topic of discussion. The product display provided at each session by the National Center for Research in Vocational Education featured a "collaboration" section of products and activities related to the study panel's recommendations regarding collaboration and linkages. Needs for collaborative relationships and strategies involving collaboration tended to emerge throughout the presentations and discussions. In his videotape presentation for the seminars, Secretary of Education Bell indicated the level of importance that the U.S. Department of Education placed upon collaboration with the private sector:

> Let me add another topic to which I hope you will direct your efforts: building a stronger partnership between vocational education and business, industry, and labor. To me and to President Reagan, private sector involvement is so important as to be automatically included in the discussion of any public enterprise.

Seminar input regarding collaborative relationships is presented relative to strengthening teaching, improving access, and strengthening finance.

Collaboration to Strengthen Vocational Teaching

Needs for collaboration and collaborative approaches relative to the strengthening of vocational teaching were principally in relationship to teacher internships in business and industry for full-time teachers and to the use of part-time teachers from business and industry.

Vocational Teacher Internships in Business and Industry

The videotape presentation by members of the NAS study committee reiterated the panel's recommendations regarding periodic industry internships for vocational teachers as a means of keeping the teacher current with the technology of the occupation that they teach. This position was strongly supported by many reactor panel members and presenters, business and industry representatives, legislators, and State board of education representatives. One member of the NAS study panel reported that the feeling among panel members regarding this issue was so strong that a recommendation for abolishment of tenure for vocational teachers was almost included. There seems to be general support for mandating periodic vocational teacher internships in business and industry and for enforcing this by means of recertification requirements and through contractual obligations.

It was recognized that many vocational teachers would be out of their "comfort zone" by being placed in the occupational role within business or industry. Thus the need for early and continued collaborative relationships in the professional life of the vocational teacher was recognized. It was also suggested that the vocational teacher business-industry internship, to be broadly successful, cannot be the responsibility of the teacher alone. Local schools and States must take responsibility for creation and support of an overall plan with the business-industry community. These plans will then need to become a part of school and teacher union contract negotiations and agreements.

Closer collaborative relationships in providing occupational experience for teachers would lead toward vocational teacher salaries that more nearly reflect their potential earnings outside the teaching profession.

Another presenter, speaking to the importance of current occupational experience for vocational teachers, observed that not only is the experience vital for the teacher, but it is also vital for the students to be aware of that relationship and experience in order to enhance the image of the program and the confidence of the student; students need to feel that their teachers have been there.

Part-time Vocational Teachers from Business and Industry

The call for collaboration relative to part-time vocational teachers is not a new one. Vocational and technical education programs at the postsecondary level have been relying to an increasing degree on part-time teachers to fulfill these staffing needs. The study panel's recommendation, however, was that greater use be made of part-time instructors at the secondary level. Several presenters indicated concurrence with the idea, especially for programs for which it is difficult to find and retain qualified full-time vocational teachers. It was also suggested that in some high-technology areas, schools and industry should collaborate to the extent of sharing both instructors and equipment in order to ensure appropriate instruction for students and to ensure appropriately trained employees for the industry.

The need for differentiation of role and responsibilities of part-time vocational teachers and full-time vocational teachers was a recurring issue raised. The existence of unique staff development needs of part-time teachers was referred to frequently. These needs and issues are discussed to a greater extent in chapter 4.

Collaboration to Improve Access to Vocational Education Programs

Improving access to vocational education programs was viewed in terms of students with needs for vocational education having those programs available to them. Special concern was given to disadvantaged and handicapped students, minorities, and women. A second aspect of access to vocational education programs regarded the quality of vocational education available to the student. Collaboration to improve access to programs is presented from each of these perspectives.

Collaboration to Improve Access to Programs

One way to improve the availability of vocational education programs to students is for the schools to make available new opportunities for training through collaboration with employers. The study committee recommended awarding school credit for occupational training provided in the workplace or by corporate personnel. They further suggested tax incentives to encourage firms to provide equipment to schools and to allow schools to use the employers' equipment in the workplace. One presenter described a city high school vocational program that bused students to several industry sites for vocational training on the latest equipment in the work environment.

The study committee recommended that coordinators of vocational education and employment training collaborate to change the requirements of cooperative education programs and apprenticeship programs to a competency base rather than time base.

An experiment with vocational incentive grants for high school students was proposed by the study committee as a potential way of improving student access to vocational training programs. Secretary Bell also strongly endorsed such an approach. The implication regarding collaboration is that such grants might be available for training in the private sector--industry training programs, or proprietary schools, as well as public education institutions and agencies.

Presenters and panel members across many of the seminars called for increased and more effective use of vocational education advisory committees and councils. They stressed the importance of communication between the business community and the schools in order to make their needs known to each other and to chart courses of action to meet those needs. Representative and active advisory committees and councils provide the mechanism for schools and business and industry to keep communication lines open.

Collaboration to Improve Quality of Vocational Education Programs

"The question of 'access' as it affects vocational education is partly one of raising the quality of programs, wherever they may be." In this sense, whatever is done to improve the quality of present vocational programs affects student access to the programs. The study committee targeted its report and its recommendations on the comprehensive high school as the part of the vocational education system in greatest need of improvement in quality. Virtually all of the committee's recommendations involving collaboration with the private sector for the purpose of improvement of the quality of vocational education programs could be construed as directed toward improving access.

High-quality student work experience programs, especially cooperative education programs, were cited often as examples of successful collaboration between school and the private sector. Several presenters and the study panel called for increased use of cooperative education as a means of improving student access to quality vocational training.

Still another area for potential collaboration to improve the quality of vocational education programs is in securing qualified administrative and leadership personnel for vocational programming. Public vocational education has long looked to the private sector as a source of technically competent individuals who could become vocational teachers. Secretary Bell, in his discussion of the problem of developing vocational education administrators, noted the importance of these individuals having worked in some type of skills training in order to know what vocational education is all about or to understand its value. He suggested that schools might consider business and industry persons for roles in administration and vocational leadership.

Collaboration to Strengthen Financing of Vocational Education

Discussion of collaboration between the schools and the private sector in strengthening financing of vocational education must be prefaced by calling attention to the position of the National Academy of Sciences study committee regarding responsibility for vocational education as quoted in chapter 1. Most presenters supported the position of the committee in that preparation of students for employment and further education is a responsibility of public education and should not be shifted to the private sector.

Collaborative relationships in strengthening of financing tended to be in terms of collaboration in the planning and sharing of human and physical resources and the provision of incentives to encourage such arrangements. Many spoke of tax incentives to encourage business and industry to provide occupational internships for teachers, internships for students, equipment loans and donations to schools, loan of key personnel to schools, and so forth.

The need for collaboration among agencies involved in the preparation of individuals for work was presented and discussed in some seminars. A specific area of discussion was related to the potential for collaboration among JTPA coordinating councils, PICS (Private Industry Councils), and vocational education advisory groups at the State and local levels.

Lack of flexibility in vocational education financing was often seen by presenters as a barrier to public vocational education's ability to collaborate with the private sector in meeting their training needs. Vocational education funding formulas are generally based upon the past year's enrollment. Presenters and industry representatives noted that greater flexibility in funding is needed if public education is to respond to immediate needs of industry. In the world of competitive business, industry cannot wait when training is needed.

Regarding the responsibility for vocational education and collaboration, Secretary Bell stated, "We also believe that the needs of vocational education can only be met by bringing the private sector into full partnership with public agencies, in support of the program."

CHAPTER III

PARTICIPANTS DISCUSS THE ISSUES

Introduction

Several questions were developed by U.S. Department of Education staff for use in guiding and focusing group discussions in each of the 10 regional seminars. These questions were directed toward issues raised in the National Academy of Sciences (NAS) report regarding (1) excellence in vocational education (2) strengthening the teaching staff, (3) improving access to vocational education programs, and (4) strengthening financing of vocational education. The purpose of this chapter is to present, in summary form, seminar participants' reactions to the discussion questions in a manner that captures the essence of the discussions. First the discussion question is presented as it was in the seminar, then major viewpoints of participants are presented followed by areas of agreement and disagreement. For instances in which very strong positions were expressed, an effort was made to identify predominant professional roles of participants expressing such positions.

Excellence in Vocational Education

Clarifying the Vocational Education Mission and Goals of the Comprehensive High School

Question 1. Given common agreement about the school's responsibility to teach basic skills, what needs to be considered in clarifying the mission and goals of the comprehensive high school for vocational education as compared to academic education?

The strongest reaction and the reaction voiced most frequently was tc avoid a dual track system in the comprehensive high school because such tracking makes vocational students second-class citizens in the school. There must be a marriage of all education in the comprehensive high school, with an integration of academic skills and vocational skills occuring. Youth 14-18 years of age should not have to make a choice between academics and vocational education. We should be asking the academic teachers, "What can we do in vocational education to strengthen academic education?"

Several participants took the position that in the comprehensive high school the mission and goals of vocational education and academic education should be the same, and that vocational education should be considered as application of basic skills. One business representative stated that "business and industry expectations regarding basic skills are just as high for vocational education students as for academic students."

Several took the position that there was not enough time or money to teach basic skills in vocational education and that we must demand that the elementary schools and general education do their job in teaching basic skills before students come into vocational education.

The need to clarify the goals of vocational education in the comprehensive high school was mentioned several times with such attendant questions as, "Is it to provide job skills, to solve social problems, to provide consumer education, to develop employability skills?" An additional proposed objective suggested by an industry representative is that vocational education provides the most effective vehicle for teaching the free enterprise system.

There seemed to be rather general agreement that all teachers in the comprehensive high school should be educated regarding vocational education and its goals.

Improving the Status of Vocational Education in the Comprehensive High School

> Question 2. Given common agreement about the school's responsibility to teach basic skills, what needs to be considered in improving the status of vocational education in the public comprehensive high school?

Vocational education must be marketed in the comprehensive high school if its image is to be improved. This point was made frequently and in conjunction with several suggested approaches for this marketing. Most often mentioned were "use successful vocational education graduates to talk about their success," "recognize common responsibilities of academic education and vocational education," "provide inservice education for guidance counselors including work experience and career exploration", and "provide orientation to vocational education to parents."

Other suggestions for marketing vocational education in the comprehensive high school included "include career education in the elementary school," "include prevocational education in the junior high school," "provide comparable recognition of vocational achievement as for academic achievement," "use advisory council members to promote vocational education," "showcase the student vocational organization," "recognize more than one goal for vocational education," "involve the high school principal and superintendent in vocational decision making," and "play up vocational teacher qualifications--skilled in a trade and as a teacher."

Another position expressed was that we "must face the facts--high schools are rated on the number of students going to college." Increased graduation requirements are further deepening divisions between vocational education and academic education. A current running throughout these discussions was that vocational education and academic education must join together in giving due respect to each student regardless of future plans.

Offering Students an Opportunity for a Broad-based Curriculum

> Question 3. Given common agreement about the school's responsibility to teach basic skills, what needs to be considered in offering students an opportunity at the comprehensive high school for a broad-based curriculum, as opposed to narrow specialization' in which a thorough examination of career choices exists by exposure to occupations in both theory and practice?

There was almost universal agreement that a common core curriculum was needed in the comprehensive high school. There was not complete agreement, however, regarding the nature of the needed common core. The position voiced most frequently was the need for a common core of skills applicable to a cluster of occupations at the 9th and 10th grade levels with specialization later. There were differences of opinion regarding where and when the specialization should take place. Some advocated specialization at the 11th and 12th grade levels of high school, others thought that specialization should take place at the postsecondary level, and still others felt that specialization should occur on the job. One labor representative stated that they could not get anyone from education who could do anything on the job without special training. There were those who advocated more industrial arts, and others who felt that industrial arts was too general and did not provide sufficient exposure to occupations. Some felt that ninth grade was too late to start occupational education.

One labor representative pointed out that the occupational cluster concept is not appropriate for all occupational areas, citing the construction trades as an example. The thought was that it is impossibile to secure instructors with the necessary broad-based skills in the many specialities included, such as electricity, plumbing, carpentry, and the trowel trades.

A second common core concept frequently advocated was a common core curriculum that would integrate academic basic skills and occupational skill development to give students the flexibility to pursue either higher education, entry-level occupations, or additional occupational training upon completion of high school. Some positions in support of the concept included the need for exploratory experiences for all students prior to 11th and 12th grades, the need for new and updated teachers, and the need for strengthening teachers' skills in teaching science and math. An opposing view was that adding more science and math requirements for unmotivated students would simply speed up their dropping out of school.

Several expressed the need for both a broad-based core curriculum and specialization in the comprehensive high school. The need was also expressed for involvement of business, industry, and labor in the design and development of a core curriculum for the high school.

Assuring the Mastery of Basic Skills by Vocational Students.

> Question 4. Given common agreement about the school's responsibility to teach basic skills, what needs to be considered in assuring the mastery of basic educational skills by vocational education students?

Much "diversity" characterizes the reactions expressed in discussions of this topic. Many of the considerations suggested by participants either directly stated or implied that mastery of basic skills must occur prior to entry into vocational education. Screening of students for basic skills was suggested using various means such as statewide examinations. Others felt that the issues of "basic skills" and "access" were contradictory--that students should be provided access to vocational education regardless of their level of basic skills.

There was considerable agreement that something must be done in the middle grades to reinforce and strengthen basic skills. It was suggested that academic skills and employability skills be tested at this time. A typical comment was that "stop gap remediation is not a viable solution as students must have long-term development of basic skills to prevent the problem."

In dealing with the problem at the secondary level, the need for a tracking system was identified several times. Such a tracking system would be to identify needs for remediation starting in the middle grades and to provide remediation courses through high school if necessary. Testing would be done to identify needs, but not to screen students out of the vocational education programs.

The need to emphasize the fact that work readiness and work ethics are basic skills was mentioned several times. Integration of basic skills into occupational training was suggested by some as a way to improve student motivation to master basic skills. A school administrator indicated that one weakness of vocational education as being too much emphasis placed on occupational experience of teachers and not enough emphasis on academic experience.

Another participant suggested the European system be adopted--that students be tracked into either the occupational track or the academic track at an early age. A counterpoint was that there is too much stigma attached to separating vocational students in any way within the comprehensive high school. Other suggestions recommended utilization of individualized curriculum, the use of criterion-referenced instructional materials, the use of team teaching that includes basic skills, and the involvement of business and industry in the identification of basic skills requirements. An example given to emphasize the need for the latter was that some employers are now routinely testing preemployment skills of applicants in the hiring process and that as many as 97 out 100 of those tested applicants do not have the requisite math skills.

Teaching Transferable Occupational Skills

> Question 5. Given common agreement about the school's responsibility to teach basic skills, what needs to be considered in teaching transferable occupational skills for future occupations?

Most of the discussions of this question centered upon content that should be considered in teaching transferable occupational skills, with some limited discussion of other considerations. Mentioned most often was the need to teach students how to learn occupational information--how to read a manual, how to analyze situations, how to solve problems. The work ethic, the three Rs, quality of performance, and a broad range of skills were mentioned several times. Other suggested content areas included computer literacy, typing, health, homemaking, vocational exploration, occupational options, a second language, techniques for preparing resumes, and assertiveness training. Offering classes on new technologies common to several programs was also suggested.

The need to identify and document transferable skills taught was a consideration voiced. Follow-up studies of students for 5 years following high school were suggested as a means of identification of skills that were considered to be transferable from 1 occupation to another.

The importance of a practical approach to teaching transferable skills was stressed using real-life work situations and predominantly a hands-on instructional approach. Other considerations discussed in relation to transferable skills were the changing roles of men and women, student readiness, and personal desire to be adaptable. The point was made that all occupations have common skills; however, problems such as social promotions, the lack of academic rigor, and lack of a commitment to excellence hamper the development of such skills.

Characteristics of Students and Teachers in Specialized Vocational Schools

> Question 6. What are the characteristics of the students and teachers of specialized vocational schools?

Although the question for discussion called specifically for characteristics of students and teachers in specialized vocational schools, discussions went well beyond these two categories. The characteristic most often mentioned regarding both students and teachers in specialized schools was that they tended to be more goal oriented than those in comprehensive high schools. That they were pursuing a single goal was also mentioned several times. The fact that there was a *total commitment on the part of students, teachers, and administrators* to that goal and that there was a higher esprit de corps among vocational educators and students in specialized schools was emphasized.

Higher-level expertise on the part of the teaching staff was mentioned frequently as characteristic of specialized schools. Some considered teacher morale to be higher and there to be greater opportunity in the specialized schools for vocational teachers to advance to administrative positions.

Higher admissions standards to vocational programs was considered by several to influence student characteristics in specialized schools. Too, several felt that students in the specialized schools tended to be more "thing" oriented rather than "people" oriented. Their learning styles, interests, and preferences differed, and they were less influenced by peers. It was pointed out that in postsecondary schools, the students are more mature and have broader work experiences than students in comprehensive high schools.

Several of the most frequently mentioned characteristics concerned administration of specialized schools. In specialized schools *the administrator's only business is vocational education*. The administrator is also largely responsible for establishing the professional atmosphere that tends to characterize specialized schools. It was also pointed out that administrators of comprehensive high schools generally are not prepared for vocational education administration and that emphasis in the comprehensive high school is an academic rather than real-world experience.

Better facilities and equipment were considered by several participants as an advantage enjoyed by specialized schools. Other characteristics mentioned were that in specialized schools academic teachers support the vocational program rather than the other way around, higher-cost programs are offered, counselors are more committed to vocational education and do a better job of counseling, there is a greater overall commitment of both time and resources to vocational education, and vocational programs are validated by the consumer.

In one of the seminars, there was group consensus that successful comprehensive high school vocational education programs and successful specialized school programs exhibited the same teacher and student characteristics.

Factors Enhancing the Prestige of Vocational Education in Specialized Schools

> Question 7. What factors appear to enhance the prestige of the specialized school's programs, for both teachers and students?

The positive, common bond of oneness of purpose among students, teachers, and the school as a whole was seen as a major factor responsible for enhancement of the prestige of the vocational education programs in specialized schools. The teachers' close relationship to the specific occupations they are teaching enhances programs for both students and the community.

Other factors mentioned several times as enhancing the prestige of the specialized school's programs were that teachers are working with motivated students, the quality of the vocational programs is higher, the quality and maintenance of facilities and equipment are higher, program completion and placement rates are higher, and business and industry can relate better to the specialized school. Support in terms of loans of equipment and staff was given as an illustration of the latter.

Several additional items were considered as contributing factors at least once in the discussions. These were that teachers in the specialized schools generally receive higher salaries, the specialized school can zero in more precisely on specific occupational training, students generally feel they will complete school and obtain employment, and advisory committees are used effectively.

Another factor considered to enhance the prestige of vocational education in the secialized school was the public relations activities. Public information programs and activities that showcased vocational programs, vocational students, and teachers were considered important. Student participation in the activities of the student vocational organization brings parents and other family members in close contact with the school and thrusts the student into the community. One comment regarding some specialized schools was that "students take a half day in the regular school and a half day in the vocational school, thus getting the best of both worlds."

Translating Successful Supervised Work-Education Experience into All Vocational Education Programs

> Question 8. What specific recommendations might schools follow for translating the successful supervised work-education experience into all vocational education programs?

Discussions regarding the above question generally indicated broad agreement regarding three points. First, some type of work experience for all vocational students was deemed desirable. Second, close coordination between the vocational program and the business-industry representative was seen as a necessity. Third, the need for close articulation between the in-school educational experience and the on-the-job experience was emphasized.

Although many suggestions were offered by participants, no single recommendation or set of recommendations emerged that could be considered as the consensus of one or more of the discussion groups. One suggestion was that work experience be made mandatory for each vocational education program. Another was that the nature of the requisite work experience be somewhere between a "work-study" program and a "cooperative education" program. Give credit for work-related experiences and subsidize work experience programs to provide financial incentives for students were two suggestions for motivating student participation in work-education experiences.

There were differences regarding the need for pay as a necessary ingredient for successful work/education experiences. Some felt that not all work experience must be a paid experience, especially beginning experiences. Others felt that "paid experience is necessary so that the student is treated as an equal with responsibility, respect, and cooperation."

The problem of availability of work stations, especially in rural areas, received attention in several group discussions. One potential solution offered was to *use a rotation system*, thus accommodating several students at one work station. Another was to *duplicate in the school, the labs and equipment used in the occupation* and to *develop projects or simulated activities*. Others advocated that it must be an actual work situation to realize the benefits of work-education experiences. Still another suggestion was to *bring the business, industry, and labor people into the vocational classrooms*.

Some suggested split days with *part-time spent in school* and part-time at work, while others recommended limiting the on-the-job experience to the *last semester of high school*.

Building upon the Mastery of Basic Education Skills

Question 9. What characteristics of the high-quality vocational education programs build upon the mastery of the basic educational skills?

Many of the discussion groups exhausted their available time before addressing this question; therefore, input in this area was considerably limited in comparison to other questions addressing excellence in vocational education. The point was made that we can have no quality vocational education programs without the basics. Another stressed that good vocational programs are accompanied by good general basic academic programs and good program evaluation procedures. Another associated open-entry/open-exit opportunities with quality vocational programs.

Other characteristics associated with high-quality programs were high student completion rates, high placement rates, placement and retention without retraining, and employer satisfaction. The point was also made that "historically, we've been graduating very good vocational education students."

Strengthening the Teaching Staff

The committee report adds to the topics of teacher reform--preparation, certification, career ladders, contracts, inservice training, salaries, and performance--the special difference that "vocational education teachers frequently gain their occupational training and experience in industry, not in schools of education, as do most academic or general education teachers."

Occupational Experience in Industry Vis-a-vis College Credit for Certification

> Question 1. What should the colleges of education do about occupational experience in industry vis-a-vis college credit and changing the certification process?

The message that came through loud and clear is that colleges of education must make provision for vocational teachers, experienced in business or industry, to receive college credit toward certification for their occupational experience in the area for which they are seeking certification to teach. Several specific settings were identified in which such practices have been going on for some time and are reported to be working well. Various procedures such as trade tests and employer certification of occupational experience are employed in these processes.

Wide variation in the certification requirements and processes was noted from the discussions. In some States, changes in certification are initiated by the State department of education, then colleges respond according to the latitude they are granted. In other States, a college degree is not required for certification; however, occupational experience and a core of educational courses including teaching methods are required. Such certification programs usually offer an option for the teacher to continue work toward a teaching degree. In some States, university and college vocational teacher education programs receive approval, then grant teaching certificates. In others, certification is controlled and processed by a certification agency within the State department of education.

Length of requisite occupational experience and the amount of credit to be granted were discussed in several sessions. There appears to be a need for more closely defining the occupational experiences necessary for certification in each occupational area. Occupational competency testing for certification was frequently suggested as a basis for granting credit for trade experience. Occupational testing was also suggested as a desirable part of recertification requirements; however, opportunities would have to be provided for the teacher to be updated in the technology of the occupation.

Much concern was expressed regarding the need for demonstrated teaching ability to be a part of the certification requirements for vocational teachers. For vocational teachers recruited from business and industry, opportunity for on-the-job teacher education and certification was stressed as especially important. Competency-based teacher education and certification approaches were suggested several times as a means of ensuring that vocational teachers possess both the requisite teaching skills and occupational skills. Several suggested that practice teaching, teacher aide experience, or teacher internships be a part of certification requirements. One suggestion called for a rotation among methodology, student teaching, and occupational work experience. Cooperative education was also suggested as a means of providing occupational experience for credit when preservice vocational teachers are pursuing teaching degrees.

Greater flexibility in meeting certification requirements for vocational teachers was indicated as needed in several States. It was suggested too that in light of the rapidity of change in many occupations, the role of vocational teacher needs to be looked upon as a fluid concept rather than a permanent concept. The role of vocational teacher may require that some individuals not be permanent employees of an institution, but that they move between business-industry and education several times during their careers.

Incentives for Closer Ties with Business and Industry

> Question 2. What are the incentives for the teaching profession and business for closer ties and how are these ties defined? What are the most attractive incentives?

Incentives for the teacher to establish closer ties with business and industry were itemized as opportunities to improve and update their own occupational skills, identify instructional resources available for their programs, identify opportunities for cooperative training stations, and assist in placement of their students. College credit for participation in planned and approved business-industry internships was also considered as an incentive to establish closer ties. Also, release time from the school schedule for establishment and maintenance of such ties was an additional incentive for teachers.

Incentives for business and industry to establish closer ties with education were noted as identification of a source of qualified employees, provision of input into training programs leading to better trained workers, and identification of opportunities for participation as supplemental teachers. A potential incentive that few businesses seem to be taking advantage of is the teaching ability of the vocational teacher who is serving a business-industry internship or is employed during the summer months. One industry representative strongly urged greater use of summer work for pay to keep teachers current in their occupations. Others suggested that exchange of personnel between education and business-industry would benefit both.

On the negative side, some concern was expressed that once teachers go back to work in business and industry, the rewards are so great that they often do not return to teaching. The question was asked, "Why should business and industry, which is paying taxes for people to be trained in schools, be expected to participate in helping the schools provide the training?"

Throughout all of the discussions, one point was made repeatedly by several participants representing both business-industry and education. This was that vocational education must actively market itself to business and industry. The educational institution must let business know that training through vocational education is available and that they can become involved. A typical comment was, "When educators can say we can save you money by having the person learning in your plant, you'll see acceptance--it's a matter of selling." Another comment was, "Business and industry are just now waking up to the need for involvement in the educational process and in time will be willing to spend some money for the partnerships that are beginning to evolve."

Availability of Internships in Business and Industry

Question 3. How available are internships in business for teachers?

A summing up of all the discussion responses to this question indicate that internships for teachers in business are not readily available; however, in many cases they can be developed. Development of internships appears to be easier in metropolitan areas than in smaller rural communities. Some schools offer sabbaticals for teachers to go back into industry for a year, but difficulty finding positions for teachers was reported. Other schools require periodic internships as part of vocational teacher professional development. Some universities were reported as offering structured internship programs, which were working well for limited numbers of teachers.

Teachers often have to fend for themselves in seeking internships. The need for a structured program to provide opportunities and to identify responsibilities for establishing and supporting internships was stressed.

More comments related to the issue of how the teacher is paid during the internship than any other aspect of the discussion. Most schools cannot afford extensive paid sabbatical or internship programs. One example given, however, entailed keeping the vocational teachers on salary while they returned to industry every third year. A major reason identified for lack of teacher participation in existing internship programs is that pay often is not part of the program. A suggestion was offered that a combination pay package be shared by both the employer and the school district as an integral part of an internship program. Another suggestion offered was to look at Korea's plan of tax incentives for the teacher coming into industry to participate in leadership activities.

Lifelong Learning for the Tenured Teacher versus Hiring New Teachers

> Question 4. Is there a priority consideratin for "lifelong learning" of the "tenured" teacher or a priority on hiring "new" teachers? What effect does this have on teacher preparation?

From discussions within groups and across all the seminars, no majority opinion emerged. Legislation has recently been passed in one State requiring teachers to have continuing education units or renewal units to remain licensed.

In another State, each local district has a renewal committee to which teachers submit a professional development plan for approval and monitoring by the committee.

Others perceived the issue as a financial problem and that budgets often dictate where the priority will be which causes some districts to follow a policy of hiring new, lower-paid teachers. Other opinions were that people do not believe in lifelong learning and that the teachers unions would not accept the concept of lifelong learning as a requirement for maintaining certification. Still another view was that few vocational teachers stay in their teaching careers a very long time; therefore, the issue was not critical.

In support of lifelong learning for the tenured teacher, the opinion was voiced that built in incentives must be a basic element of any system for teacher lifelong learning. It was pointed out that lifelong learning is required of CPAs, nurses, and doctors, so why not for teachers? Another point made was that people do have an urge to learn; however, the manner in which lifelong learning for teachers is offered needs to be changed to deal more directly with teachers needs on the job. Teacher education institutions can and are adopting programs to meet needs of both beginning teachers and of teachers pursuing lifelong learning.

Lifelong Teacher Training and Certification

Question 5. How can the traditional arrangement of lifelong teacher training and certification be altered to suit the needs of vocational education schools, students, employers, and educators?

Incentives was a key word in the discussion of how traditional arrangements for lifelong teacher training and certification should be altered. Some teacher training institutions lead the way in sensing changing needs on the part of vocational teachers and schools and in responding to those needs. Others respond when certification requirements are changed or the demand for specific courses or programs is sufficient to make it a profitable change. Discussion about needed changes in certification included required periodic recertification that would include evidence of updating in the technology of the teachers' occupational area and in teaching methodology. Business-industry internships were a suggested requirement for recertification.

It was noted that some States currently have periodic recertification requirements for voth vocational teachers and administrators. It was pointed out, too, that the teachers and the local schools, the State department of education, teacher training institutions, and business and industry all have an interest and responsibility in the vocational teacher's lifelong learning. Thus, they all need to plan cooperatively for and participate in it.

Some suggested characteristics of recertification plans were for teachers to have a contracted obligation to participate in inservice activities, for college credit to be granted for inservice activities, for teachers to have input into planning inservice activities, for personal work experience to be rewarded, and for committees of peers to approve professional growth plans.

Suggested ways in which teacher education institutions might respond to changing needs would be to involve more field-based teacher preparation in vocational teacher training by using extension courses to a greater extent, to use modern instructional technology such as satellites for delivery in remote areas, and to consolidate teacher education programs in an occupational area. The intent of this last strategy is to have one or two high-quality programs within a State rather than several without the necessary resources to do the job correctly.

Participants envisioned an alternative to the recruitment of teachers from industry that would be a partnership between business and industry and the school. A professional teacher would be hired by industry to train and work to acquire the occupational specific skills. The partnership thus created would ensure the status of teaching as a full-time profession while giving the professional teacher a better understanding of the needs of business and industry.

Institution of a career ladder concept in full-time vocational teaching might very well address many of the needs for lifelong learning on the part of vocational teachers. With a place to go professionally, and specific professional development and performance criteria associated with each level, teachers would willingly do what is necessary to move from a beginning, novice, or intern to fully certified, and on to a master teacher level.

A concern was voiced that current certification is too rigid to attract excellent part-time business-industry personnel. It was stated, however, that teacher education institutions can tailor a program to the needs of part-time instructors and provide variances that certification and higher education regulations will allow.

Improving Access to Vocational Education Programs

The committee report has identified the problem of access to vocational education programs as twofold: (1) students who are deficient in basic skills are denied access to high-quality programs because more qualified applicants are available and (2) there is an undersupply of "sound vocational programs in many but by no means all depressed inner-city or rural communities."

Development of High-Quality Vocational Education Programs in the Inner-City and Rural Communities

Question 1. How can more high-quality vocational education programs be developed in geographic areas such as the inner-city or rural communities?

Discussions focused upon a wide range of issues relative to improvement of the quality of vocational curricula and program design, the quality of the entering student, the quality of the professional staff, and the quality of overall planning for vocational education. Discussions also focused upon several suggestions for improving the quality of vocational education in rural communities.

Design of vocational education curricula and programs. Earlier exposure to broadly based occupational skills was advocated, with specialization to occur late at the secondary level, at the postsecondary level, and on the job. Major considerations in the development of such skills would be development of work attitudes and occupational skills, and exploration of interests for further specific job training.

A need was recognized for closer ties with and involvement of the business-industry community in planning the broad-based program and in selecting and implementing specialized programs.

The use of fully functioning advisory councils was seen as a necessity in the reorganization of vocational curricula and programs. Implementation of individualized competency-based education (CBE) systems in vocational education was suggested by several as a means of coping with the wide range of student abilities, previous skill development, and differing levels of basic skills development. Increased use of cooperative education was also suggested as a means of improving program quality.

Qualifications of the entering student. Getting the appropriate students into vocational education programs and ensuring an adequate level of basic skills to be successful were major concerns. The negative image of vocational education perceived by many students, parents, and other educators is a barrier to participation by many needy students. The lack of role models mitigates against many youth choosing vocational education. Vocational education is not considered by many as having equal status to college preparation. They further perceive that a choice must be made between vocational education and academic course work. This choice is clouded by lack of definition regarding the purpose and goals of secondary vocational education. Suggestions for improving student perception and interest focused on exposure to occupational exploration and counseling starting in the middle grades and recognition and awards for occupational excellence equal to those for academic excellence.

Again, it was pointed out that students at the secondary level should not have to be tracked into either vocational education or college preparation. The opportunity should be there for the individual to do both. Further, school goals and vocational education goals should recognize such purposes. It was recognized, however, that the trend toward increased academic requirements for high school graduation is making it increasingly difficult for students, especially those most in need of vocational education, to pursue vocational training and meet academic requirements. The result is higher dropout rates and lower vocational enrollments.

The problem of inadequate basic skills must be attacked earlier in the educational program. Application of new technology in many occupations calls for a broader range of basic skills. Assessment of basic skills in the middle grades and further basic skills development coupled with occupational exploration were suggested by some. Also, a better job needs to be done in relating basic skill requirements to occupational requirements and setting standards for program admission. Admission of basic skills deficient students to vocational programs without concurrent remediation is not consistent with the concept of access. Some participants did not feel that vocational teachers were generally cognizant of basic skills levels of their students and that, due to lack of preparation, they were not effective in improving their students' level of basic skills.

Improving the quality of the educational staff. The need to upgrade the skills and image of vocational education personnel, especially of teachers and counselors, was noted several times. Updating of school administrators was also identified as a necessity if the quality of vocational programs is to improve. Lack of commitment to upgrading staff was seen as a deterrent to improving vocational education programs. One industry representative reported that schools typically devote 7.7 percent of their budgets to research and development and supervision, whereas industry uses 22 percent for research and development and supervision.

Vocational education planning. More comprehensive planning for vocational education was urged, beginning with the programs at the middle grades and giving special attention to the articulation between secondary and postsecondary schools providing vocational training. Some called for a coalition among teachers, administrators, business-industry and labor, to target inner-city and rural areas with specific and unique needs. Plans must provide the level of flexibility needed, for example, to provide stipends that allow an inner-city student to complete a school program when the family needs the work income.

One participant reported the initiative of State area planning councils whose major responsibility is to improve the quality of vocational education programs in the rural and inner-city areas. These councils are finding it more difficult to serve the rural areas. "Although some satellite programs are working in the rural areas, they are by no means comparable to the programs set up in the inner-city areas."

Improving quality of vocational education programs in rural areas. Transportation, equipment, low numbers of students, and qualified staff were of major concern in this category. Several suggestions surfaced, some of which were cited as operational in one or more areas. Sharing of resources characterizes many of these approaches. Several participants reported using *mobil laboratories* that operate on a rotating schedule to serve smaller numbers of students in several locations throughout the school year. Another described *innovative scheduling* which makes better use of existing facilities in off-hours and use of existing buses in between current schedules. The *use of instructors on a half-time or quarter-time basis* and by more than one district was another approach.

Some districts regularly *purchased slots in nearby districts* for a few students on a tuition basis when the vocational program could not be offered in the home district. *Taking out contracts with local business and industry* for specific training was suggested, as was having contracts with proprietary schools that offer needed programs. *Residential schools* with strong cooperative education programs located in areas of heavy business and industry concentration was another approach described. Individualized competency-based vocational education delivery systems were seen by some as helping serve small numbers of students in related occupational areas.

Vocational Incentive Grants: Pros and Cons

> Question 2. Are vocational incentive grants that are meant for students between 14 and 18 and are patterned after the basic education opportunity grants a good idea and should they be used to obtain vocational training in public or private schools anywhere in the country?

Perhaps the most lively discussions and strongest-worded comments among all of the discussion groups were registered relative to the issue of incentive grants. The same question was posed relative to discussion of issues in financing vocational education (which is presented later in this chapter) with similar results. The predominant reaction overall was a resounding "no" to incentive grants, especially for the 14- to 18-year-old student. Several discussion groups went on record as unanimously opposing incentive grants of any kind, while others indicated agreement that incentive grants should be available only to students age 18 and above. One discussion group, however, recorded a vote of approximately 70 percent versus 30 percent in favor of incentive grants.

The most frequently recorded reason for opposing the incentive grant concept was that 14- to 18-year-old students are not ready to make that kind of career decision. The next most frequently voiced concern was that it was an effort to funnel funds into proprietary schools and away from the public education system. The feeling was expressed, too, that it would result in a "marketing disaster" with schools vying for the best students and the most needy students being left for the poorer programs or no programs at all, thus contributing to the overall problem of access. Several believed that the incentive grant program would contribute to the deterioration of public vocational education whereas others stated that public schools would not be affected. Several expressing opposition to incentive grants recommended that a system of scholarships be offered instead by business, industry, and schools.

Other points offered in opposition to incentive grants included reasons such as "They would encourage fly-by-night operations to get funds," "They would be difficult to administer," "They would cause problems of student transportation, chaperoning, and lodging," and "There would be a need for truth-in-advertising regulations." Representatives of regional vocational skills centers funded by local districts recommended that a system of incentive grants not be used. An industry representative commented that incentive grants would further confuse the vocational training picture by encouraging further variability among vocational training programs and program graduates. Another industry representative suggested that industry should issue incentive grants for training in areas of need, such as highly skilled occupations.

Those supporting the concept of incentive grants most often spoke of meeting needs of special population youth both in and out of school and of providing student access to vocational training not available in local districts. Several supporters recommended 16 or 18 years of age as the minimum for such grants; others said they would support the concept on a trial basis. One discussion group went on record as supporting the idea that "we must take the chances to gamble with new methods of serving students in schools and to find ways to help market training for students." One asked why we now consider incentive grants to be bad after very positive experiences with the GI bill and student loan scholarships?

A State department of education representative believed that incentive grants could have a very positive impact on area vocational centers and would help save these centers in the State. Several participants noted that the concept had already been implemented in some areas. Examples given included schools funded by the Bureau of Indian Affairs, and a school district in which 11th and 12th grade high school students were allowed to enroll and their tuition was paid for job-specific training in a community college. One State legislature was described as having recently approved a State vocational scholars program.

Accreditation of Training Institutions and Incentive Grants

Question 3. Would consumer protection by accreditation of training institutions and "truth-in-training" regulations be necessary if there were vocational incentive grants?

Most of the discussion groups expressed a very strong "yes" to the need for accreditation of training institutions if vocational incentive grants were to be implemented. Several recorded a consensus on the matter. The need for statewide criteria and accreditation procedures was advocated by several participants. Some supporting the idea indicated that accreditation and truth-in-training regulations were needed due to technological advancement even though the incentive grants may not be implemented. Another questioned why such grants should be offered just in vocational education? Why should they not be for all K-12 programs? Another suggested trying incentive grants and accreditation on a pilot basis.

Some reasons presented in opposition to accreditation of institutions were that student success would be a more valid criteria, accreditation would be an administrative nightmare (problems with current college accreditation were cited here), it causes the local schools to compromise their programs due to the whims of the State that establishes the criteria, and accreditation would not be needed due to the free enterprise idea, which would promote quality through competition. Others reacted to the whole idea of incentive grants and accreditation with observations such as "Quality programs would surface; however, it would wipe out many schools," "A strong public education system must exist, otherwise an autocracy will develop," and "It would create a profit-making philosophy within schools."

Financing Incentive Grants

> Question 4. "What is the best way," if the practice were feasible, for financing education vouchers for vocational education students between the ages of 14 and 18? What about vouchers for older workers beyond the age 18? Would businesses, unions, workers, and schools wish to participate? How should these vouchers be financed?

Little of the discussion actually addressed the matter of financing educational vouchers as presented in the above question. Much of the discussion continued to focus upon the issue of whether or not incentive grants should be provided for 14- to 18-year-olds, with little attention being devoted to how they might be financed. Again, participants generally rejected the idea of incentive grants for 14- to 18-year-old students.

The position most frequently espoused was that if incentive grants could be used effectively, they should be at the postsecondary and adult level. The success of Pell Grants in encouraging large numbers of students to pursue postsecondary education was cited as an example of how they might work.

Some sources of funding were discussed, however. Several assumed that reallocation of present Federal funds was intended. The comment was made that currently, funds through the Vocational Education Act could not be freed up for incentive grants. Collaboration with business and industry was suggested. The idea of skills training tax credits, similar to targeted job tax credits was presented with the observation that "we haven't learned how to use business training resources, which far outnumber outlays for education." Related issues discussed at this point were the matching of employees and employer and the legality of training agreements with minors. An example of business-education collaboration was presented of a project in one school district in which businesses train youth for employment, then are reimbursed by the district in the form of a tax credit.

Strenthening Financing

Question 1. What factors should be considered in changing or modifying vocational education programs' funding formulas?

The consideration mentioned most frequently in discussions on this question was the need for a long-range program of Federal funding for updating vocational buildings and equipment. Discussants generally supported this position with the argument that given rapidly advancing technology, the necessary new equipment and buildings to house the equipment could not be supported through current levels of State and local vocational education funding. In a closely related suggestion, one group recorded agreement with the idea that funding formulas should be modified to provide more support for high-cost programs.

Mentioned several times was the need of schools to have availability of a pool of money to support "quick start" programs. Reasoning in support of this modification was the fact that in most States, vocational program funding is based upon the number of full-time equivalent students for the previous year. It is therefore very difficult for a school district to find the money to respond quickly to fast-developing training needs that business and industry may have. A related, desired change that was expressed several times was for greater flexibility in the use of funds so that districts and States could respond in a timely manner to funding needs unique to the setting.

The changes in funding formulas suggested more than one time in discussions called for recognition that (1) *there is a greater need for vocational curriculam change and updating than in other areas*, (2) *there needs to be greater equality of financial support between secondary and postsecondary* vocational programs and with nonvocational areas, (3) *program excellence and success should be better recognized*, and (4) *minimum support levels should be established for programs in low-population areas*.

Several participants proposed that incentives in funding formulas be directed toward program improvement. This recommendation included incentives for technological updating of teachers and programs, incentives for establishment and development of jobs in the area, incentives for implementing individualized instruction and safety, incentives to promote collaboration with JTPA and other agencies, and a scholarship program for students preparing to be vocational teachers.

Other suggestions called for a restructuring of vocational education funding and abandonment of the patchwork approach to funding; equal funding by the local, State, and Federal governments; distribution of Federal funds by region rather than directly to individual States; provisions for States to contract with private as well as public schools; and support of apprenticeship programs.

Sharing Capital Equipment Resources

Question 2. What are the most workable ideas for the sharing of capital equipment resources?

Foci of discussions can be clustered into three major areas: (1) collaboration between schools and business and industry, (2) collaboration among school districts, and (3) suggestions for dealing with unique problem of rural areas.

Collaboration between schools and business and Industry. The idea of equipment being made available to schools on a loan basis was presented most frequently. Two more ideas--scheduling student training at business-industry sites during production lows and expanding tax credit legislation now in Congress to include provision of equipment to all vocational education--were suggested several times. Also suggested was provision of equipment to school districts by business and industry for use in training business-industry employees at the school site and for use in teaching students. The example was given of a major automobile manufacturer that is currently moving regional training centers to community college campuses under such arrangements.

Collaboration among school districts. The most frequently suggested approach was extension of daily schedules for the use of facilities and equipment by both secondary and postsecondary/adult learners. Another approach was to share expensive equipment and/or the facility on a rotational basis among nearby schools. An example was cited of a seven-county area that shared both equipment and teachers in this way. To this was added the restriction of purchasing expensive equipment already owned by one of the schools. Sharing curriculum and training materials was suggested on both district and State levels.

Unique problems of rural areas. Isolation by distance from business and industry as well as from other schools often severely limits opportunities for a school to collaborate with either of these groups. Provision of adequate equipment for training in these settings is especially difficult. Lease-purchase of equipment was suggested as an approach to deal with the difficulty of outright purchase of equipment within one annual budget. Allowing schools to keep unspent year-end monies that accumulate in an equipment fund was suggested. It was stated, however, that in one State, a depreciation account would have to be set up in the State budgeting act in order to use year-end excess funds for purchasing new equipment and replacing old equipment. "Equity in options" laws were suggested as a means of preventing discontinuation of vocational education programs or removal of equipment in sparsely populated areas.

Financing Vocational Education through Student Incentive Grants

> Question 3. Are vocational incentive grants that are meant for students between the ages of 14 and 18 and are patterned after the basic education opportunity grants a good idea and should they be used to obtain vocational training in public or private schools anywhere in the country?

Reaction to this question in discussion groups relative to strengthening financing of vocational education was very similar to those of discussion groups that looked at the idea relative to improving access to vocational education. Response to the idea was predominantly negative with several of the groups recording a negative vote on the issues. Some limited their negative reaction to the involvement of only 14- to 18-year-olds. Support or opposition to the idea did not appear to be associated with various professional roles of individual discussants. A typical recorded response was, "The idea of vocational incentive grants is questionable to bad. Both industry and education agree. There are too many opportunities to waste funds and not get the job done." Another noted that such grants are needed for adults more than for secondary students. The concern that private schools would benefit more than public schools was again voiced several times.

Several individuals offered points in support of the idea. The most frequently mentioned was that incentive grants should be made available only where specific public vocational programs are not available. A rather typical recorded response was, "If incentive grants can be federally financed and structured in such a way as to guarantee that the best students are not siphoned away, then it's probably a good idea." Other positive reactions were "Vouchering would improve quality as parents make choices and demand quality," "Vouchering would make us more critical of ourselves--would make us look harder at our programs," and "It would be a viable alternative for keeping students in school longer."

Financing Incentive Grants

> Question 4. "What are the best ideas," if the proposal were feasible, for financing education vouchers for vocational education students between 14 and 18? What about vouchers for older workers beyond the ages of 14-18? Would business, unions, workers, and schools wish to participate? How should these vouchers be financed?

Apparently, discussion groups chose generally to continue the forum on the merits of incentive grants rather than address ideas for financing them. Opposition to the idea of incentive grants was very similar to that outlined earlier. Three ideas were mentioned one time each as potential ways of financing education vouchers for vocational education students. One was that a percentage of the unemployment insurance funds could be used for this purpose. Another suggested that the potential exists for Job Training Partnership Act funds be used in a voucher-type payment. An industry representative commented that "this sounds like CETA. We wouldn't hire anyone from CETA. From experience, we found that when the money ran out for CETA people, they went back on unemployment." A State department of education representative expressed the view that "we must look to our own resources and funding of vocational education."

There was some support for the idea that vouchers might work for older workers, particularly displaced homemakers, those displaced due to job obsolescence, and those changing careers--where other programs in the past have not been successful.

One group expressed the belief that businesses, unions, workers, and schools were likely to participate in a program of educational vouchers if the requirements and procedures for participation were not complicated. The group members stressed the need for simplicity in such a system.

CHAPTER IV

RELATED ISSUES, STRATEGIES, AND RECOMMENDATIONS

Among questions utilized for focus of attention within discussion groups was one question dealing with current reform issues and another question directed toward identification of appropriate strategies and plans of action at local and State levels. The two questions were provided to discussion groups in each of the three areas of strengthening the teaching staff, improving access to vocational education programs, and strengthening financing of vocational education. Following are the two questions posed:

> Question 6. Are there current reform "issues" and future priorities--related to these questions--which have not been addressed and yet need to be integrated with the report's recommendations for specific next steps?
>
> Question 7. What strategies and plans of action by specific groups, organizations, agencies, and institutions at the State and local levels are appropriate next steps, especially in collaboration and partnership for the foregoing?

As input from group discussions regarding current reform issues and strategies are examined it should be recognized that discussion time did not allow for addressing each discussion question specifically in all of the regional seminars. Although recorder notes from some discussion groups indicated that the two above questions were not specifically addressed, examination of recorder notes for all of the discussion sessions do reveal emergence of several current reform issues and some indication of strategy formulation. Current reform issues, strategies, and recommendations will be discussed in this chapter relative to strengthening the teaching staff, improving access to vocational education programs, and strengthening financing of vocational education.

Current Reform Issues Relative to Strengthening the Teaching Staff

Issues that surfaced relative to strengthening the teaching staff exhibited a rather high degree of interrelatedness. The issues have been clustered for presentation here under the overall topics of recruitment and retention of vocational teachers, coordination among teacher education institutions, and the concept of vocational teacher as a lifelong role.

Recruitment and Retention of Vocational Teachers

"The impact of studies, reports and findings, coupled with the loss of esteem around the professional teacher ranks has reduced the outlook for teaching as an honorable occupation." Other factors cited as contributing to this low status of professional teachers are more attractive salaries in business and industry, outdated facilities and equipment in many schools, and increasing student discipline problems. Needed are ways to enhance the image of vocational teaching to both students and adults.

How can we tap highly competent business-industry-labor people for teaching, especially at the secondary level? Indications suggest many such people have an interest in teaching. We have been more successful at the postsecondary level in tapping these resources. We have been doing this largely through the use of part-time teachers. Although this procedure has many advantages, there are some disadvantages too. There is a point at which the ratio of part-time instructors in relation to full-time instructors in a school presents serious problems with planning and permanence. One presenter indicated that when this ratio exceeds two to one, then there is no one left to "keep the store" and the school's programs deteriorate.

An issue relative to attracting highly qualified people into vocational teaching has been and continues to be that of offering a salary commensurate with the level of technical expertise. School district salary schedules are generally structured to recognize levels of academic preparation for the role of teacher, which is important, and the amount of experience the individual has in the teaching role. Seldom do salary schedules reward vocational teachers for the amount of occupational experience they bring to their teaching role.

An identified need which relates directly to teacher retention is that of a support system to assist the new teacher throughout the first 3 years of instruction. In education we often search for and sometimes contrive activities to enhance the teachable moment concept--the moment when conditions are most ideal for an individual to learn. With new teachers from business and industry, and for many who have been through teacher education programs, teachable moments are most frequent during those first years. It is during those real-life struggles with planning instruction, maintaining discipline, managing instruction, and providing appropriate resources that the greatest opportunities exist for development of the teacher. We need mechanisms through State departments of education and through teacher education institutions, or both in collaboration, to provide this support.

Coordination among Teacher Education Institutions

There are two aspects of the concern regarding the need for closer coordination among teacher education institutions. First, there is concern regarding unnecessary duplication of effort on the part of teacher education institutions. Is there need for as many institutions to be engaged in training vocational teachers within a specific state? And second, could those resources be concentrated with fewer institutions or among fewer service area programs within an institution in order to improve the quality of teacher training provided and to increase the level of services to inservice teachers.

Vocational Teacher as a Lifelong Role

The common concept of "vocational teacher" is that an individual chooses to enter vocational teaching full-time and that teaching is a lifetime commitment unless the teacher chooses to move up into administration. This has generally been borne out in practice, with some exceptions. Part-time vocational teachers often do not fit this concept and many vocational teachers entering teaching from business and the trades for one reason or another, pay not being the least of these, choose to return to their previous occupations.

With the rapid adoption of new technologies among many occupations and the changing occupations themselves (some growing rapidly while others are disappearing), the appropriateness of our present concept of lifelong vocational teacher needs to be examined closely. At least two different concepts were suggested as alternatives.

The first of these concepts is that "vocational teaching" would be a phase of an individual's occupational career if they chose to do so. Close collaboration and agreement between business-industry-labor and education agencies would be necessary in order to recruit and train individuals for a specified term of vocational teaching. The terms of service, at most a few years, would be related to the rate of change within the occupation. The individual would then return to the firm where previously employed, possibly exchanging positions with another employee. Thus the role of vocational teacher would be considered as a temporary role with the intent that vocational teachers would be up to date in the technology of their occupation, and there would be greater flexibility to change vocational curricula to reflect changing occupational conditions.

The second major concept is that vocational teaching would be a lifelong commitment and professional role. However, the specific occupation being taught or the nature of the occupation being taught would change as technologies and occupations changed. The vocational teacher would be recruited, trained, and upgraded as a professional teacher. However, the subject matter and occupational skills taught would change to reflect changes occurring in business, industry, and labor. Again, collaboration between educational agencies and the business-industry community would be necessary as the professional vocational teacher would periodically need to be placed in occupational roles for training and work experience in preparation for changing teaching assignments.

The idea of a career ladder for the professional vocational teacher would be coupled with the role as an incentive in recruitment of high-quality individuals into the profession and to recognize differing levels of responsibility and expertise among professional vocational teachers.

Strategies and Plans of Action Relative to Strengthening the Teaching Staff

Five different strategies were identified which are currently in use or were suggested as means of strengthening teaching staff. These strategies related to internships for vocational teachers, industrial coordination, high technology committees, apprenticeship training, and enhancing the image of vocational teachers.

Business-Industry Internships for Vocational Teachers

Vocational teacher internships in business and industry for the purpose of upgrading their knowledge and skill in their area of occupational instruction are not necessarily new. Some statewide programs have been operating with some success for several years. Recognition of the importance of this type of collaborative arrangement and the development of policies and procedures for effective implementation and management of these programs is growing. Teachers, administrators, advisory councils, and State departments of education appear to be becoming convinced of the necessity of getting vocational teachers into the workplace for updating in the technology of the occupation. The necessity of strong active advisory committees and their key role were reinforced.

Industrial Coordinator

Industrial coordinator is an emerging "linker" role between schools and the business-industry community. A major function of this role is to seek out needs of specific businesses and industries of the community and to foster the necessary collaborative agreements and activities between the school and the business-industry to meet those needs. Industrial coordinators can also play key roles in the development of internship opportunities for vocational teachers.

High-Technology Committees

The high-technology committees are formed with business-industry-labor representation across all of the major enterprises of the community. Their purpose is to examine the application of high technology across the major occupations and to serve as a resource to the school in decision making regarding curricular update and staff update.

Apprenticeship Training

In one state, collaboration between education and the business-industry-labor community has resulted in closer ties between apprenticeship training and public education. Apprenticeship training is now tied to associate degree plans through the state's junior colleges. This seems to encourage journeymen to return to the junior college for further education.

Enhancing the Image of Vocational Teacher

Although specific State or local programs were not identified, several strategies were noted that were intended to enhance the image of vocational teachers both within the school and the community. Planned, regular public relations information featuring specific teachers, their occupational expertise, their teaching expertise and accomplishments are essential. Treatment of the teacher as a professional relative to financial rewards included recognition of occupational experience on the salary schedule, and financial incentives for inservice and upgrading, and possibly merit pay for vocational teachers. Regarding the latter item and its controversial nature, one discussion group identified the existence of several models in the region and recommended the following:

> The States of the Region under the leadership of the Chief State School Officers in concert with vocational educational leaders, faculties, and student representatives should explore a regional study for implementing merit pay for vocational educators. The status afforded such a study should be that of a multi-state commission.

Current Reform Issues Relative to Improving Access to Vocational Education Programs

Several additional access issues were raised in seminar presentations and in discussions of current reform issues at the seminars. Most of these issues relate to the role of vocational education, to the utilization of vocational education resources, or to the relationship of vocational education to academic or general education. Each of seven issues identified from one or more of the seminars are presented here.

Focus of Vocational Education on Preemployment Training

By placing major focus upon serving high school age students in vocational education, opportunity to provide inservice upgrading is being largely ignored. Secondary schools have to a great extent abdicated all responsibility for adults to the postsecondary institutions. In this period of declining populations of youth, especially at the secondary level, continuing to ignore needs for upgrading and retraining workers can have serious consequences for the vocational education system. Underutilization of vocational education human and physical resources threatens the ability to maintain the system through this downswing in numbers of youth. Especially threatened are the specialized secondary vocational schools which depend upon a number of contributing districts for their student populations.

The Unfinished Job of Preparing Nontraditional Students

Results have led some to conclude that access has not been achieved in vocational education for students preparing for occupations considered nontraditional for their sex. An example given to illustrate the point involved a major National and international retail firm which had established a company goal of having 20 percent of its employees in nontraditional roles. The firm, however, had achieved something in the magnitude of only 2 percent, with the major barrier being that practically "no nontraditional students are coming out of vocational education programs."

The Role of Vocational Education as Perceived by the Congress

Emphasis within vocational legislation and resource allocations reinforce the idea that the Senate perceives vocational education as a program for disadvantaged and handicapped. One presenter warned of problems of labeling that have been associated with MDTA, CETA, AND JTPA program participants. Another commented that vocational education is perceived by many as an effort to solve the social ills of the country. These people are advocating that vocational education legislation needs to better reflect the idea that vocational education is for everyone.

Integration of Vocational Education into Secondary Education

A common perception of vocational education at the secondary level is that it is something apart from or in addition to secondary academic or general education. This view is often held by both academic and vocational teachers, administrators, students, parents, and the community at large. Generally, a good job is not being done of integrating academic education into vocational education and vice versa. We have not done a good job of identifying what vocational education's contribution is to academic education--what knowledge and skills are taught, when, and how. Nor have we done a good job of identifying what, how and when vocational knowledges and skills can and should be taught in academic courses. Also, there is concern regarding recognition of different learning sytles among students and the need to offer alternative ways of learning. One presenter advocated vocational education as a way of education that provides motivation to many students and that it helps them to learn.

Recognition of the Role of Private Schools in Vocational Education

While this issue did not surface in many of the seminars, the questions were raised regarding why and how the role and function of private vocational schools can be legitimately ignored in local, State, and Federal vocational education planning. Quoted NECS statistics showed that of 1.9 million persons enrolled in noncollegiate institutions nationally, 75 percent were enrolled in private vocational schools. Sixty-five percent of all institutions offering occupational training are proprietary schools. It was pointed out too that these students pay tuitions well above those of students enrolled in public institutions. The case being made by one representative of a State federation of private vocational schools was that proprietary schools are a major resource for potential collaboration with public vocational education.

Other Options Needed

Concern was noted from several of the seminars that additional options need to be identified and explored as means for improving access to vocational education programs. There is apparently rather general concern that the idea of incentive grants was being presented as "the" solution to improving access. Several called for still other options, especially in improving access for students in rural areas. Just as location limits options for vocational training, it also limits options for collaboration with the private sector.

Strategies and Plans of Action Relative to Improving Access to Vocational Education Programs

Although specific plans of action for improving access to vocational education programs were not presented, some strategies for improving access were suggested. These strategies deal with establishment of collaboration councils, employment insurance, and learning from the private sector.

State Collaboration Councils

The strategy presented embraced the idea of a body to promote voluntary sharing of vocational education and private sector resources. Private sector involvement in policy-making was credited for the effectiveness of one State's JTPA programs, a program that has an 86 percent placement rate. Some supported the notion that one council similar to JTPA's PICs (Private Industry Councils) could and should serve as a coordination body in promotion of collaboration.

Promoting Collaboration between Industry Training and Public Vocational Education

The strategy suggested concerned incentives for sharing business-industry training facilities and equipment with public vocational education programs. As an inducement to business-industry to make their training resources available to the schools recruiting privileges might be offered as a trade-off. The collaborating business-industry would be invited in to recruit future employees while still in school. For example, students might sign "letters of intent" to work for employer "K" upon completion of the training program.

Employment Insurance

The idea presented was that employment insurance would be a part of or a companion of unemployment insurance programs. As an individual works a training account accrues, then when the individual's job is abolished, the individual becomes eligible for unemployment compensation and as an incentive for retraining, also becomes eligible for use of the training account to prepare for another job.

Learning from the Private Sector

Some suggestions were made that public vocational education study the factors contributing to the success of proprietary vocational training programs and industry training programs in an effort to find those characteristics that could be transferred to public vocational education programs. Of particular note was the high placement rates of private vocational education schools and the willingness of students and parents to pay fees much higher than public school tuition to attend these schools. It was noted also, however, that private schools do not have the same commitment to serve all students as do public schools and can be quite selective and rigid in basic skill requirements for admission.

Modification of High School Graduation Requirements

Competency attainment was suggested as an alternative to course and credit hour requirements for high school graduation. The trend toward increasing academic course requirements for high school graduation is significantly reducing vocational enrollments at the secondary level. It is also believed that many students, unable to fit vocational education into schedules crowded with required courses will drop out of school. The competency approach would also provide recognition for knowledge and skills whether learned in academic courses or in vocational education courses.

Current Reform Issues Relative to Strengthening Financing of Vocational Education

Current issues identified regarding the need to reform vocational education financing related to providing increased flexibility in basic vocational education funding and planning and funding vocational education programs solely on the basis of labor market demands.

Flexibility Needed in Basic Vocational Education Program Funding

State educational appropriations are generally based on a capitalization formula. Such funding offers very little incentive to school districts to respond to new program needs and to implement high-cost programs. Many vocational educators therefore oppose funding vocational education on a full time equivalency (FTE) or other capitalization basis. The lack of flexibility in funding also makes it very difficult for a local school to respond to a local business-industry need for a quick start-up, customized training program. Funding for the local school, based upon the previous year's FTE, generally is not adequate to provide the resources needed for such programs.

Labor Market Needs Versus Student Individual Needs

Planning and funding vocational education programs to meet labor market needs versus serving the personal needs of individual students is a broader issue than the issue of what the basis for planning and funding will be. It reaches to the very purpose(s) of vocational education at the secondary and postsecondary levels. If vocational education is to contribute to the development of a student's basic skills and other employability skills, then planning and financing programs solely on labor market demands is not adequate. Some agreement is needed regarding the function and objectives of vocational education at both the secondary and postsecondary levels along with mechanisms for evaluating success.

Strategies and Plans of Action Relative to Strengthening Financing of Vocational Education

Several strategies currently in place were described that presented a way of financing some aspect of vocational education programming being carried out through collaborative efforts. Other strategies were suggested as ways of financing collaborative vocational education efforts.

Recycling Unemployed Workers Back into Jobs

One State has passed legislation that allows a link between a community college and local industry to recycle an unemployed worker back into the labor force. A business-industry hires the individual and provides on-the-job training for a portion of the day. The school provides on-site training in the business-industry. The training is financed by deferred tax payments to support the school providing the training. The results are as follows:

- An unemployed worker finds a job and gains a productive identity

- Business-industry fills a void in preparing an individual for work
- Money invested in education stays in the local community
- A strong link is maintained between industry and education
- Training may take place in industry or the college setting, whichever provides the best setting, i.e., state-of-the-art equipment or structured environment, whichever is needed to make the training effective.

"Try-Out-Employment"

A JTPA "Try-Out-Employment" project is designed for graduating students that qualify for JTPA and perhaps are difficult to place. Cost to the employer is nothing. JTPA pays $3.00 per hour (which is nontaxable) directly to the employee, and there is no obligation for the employer to hire that employee at the end of the cycle.

Tax Incentive for Training out-of-School Youth

A local secondary school district has a program of collaboration with industry for training local out-of-school youth for employment. A school district coordinator works with business-industry in arranging training slots for school dropouts. The employer then trains the student for a specific job in the business-industry. Upon completion of the training program, the employer is reimbursed for the training through a tax credit procedure with the local school district.

Tax Credit for Services of Industry Personnel

A similar system of tax credits was suggested as incentives for business-industry to collaborate with school districts to make key individuals available to fulfill specific vocational education program needs. Serving as instructors, assisting in program planning, and assisting in evaluation were potential roles for individuals from business-industry

Tax Credits for Providing Student Internships

Tax credits were suggested as incentives for business-industry to plan and provide occupational internships that would rotate students through a series of job functions relating real world situations to in-school vocational education. An additional incentive to employers would be the opportunity to assess the abilities and interests of a number of potential future employees.

Strategies for Increasing Availability of Equipment for Students

Following are several strategies suggested for making needed equipment available for students in vocational education:

- Expand the cooperative education method of instruction in high-cost programs
- Initiate collaborative efforts between schools to share high cost equipment, particularly where the equipment is not needed full-time.

- Use lease-purchase agreements to purchase and charge high-cost equipment to general fund budgets over an extended period of time instead of purchasing such equipment through annual budgets.

- Identify leasing vendors instead of purchasing equipment subject to rapid obsolescence.

Next Steps

The following recommendations for continued action in responding to Education for Tomorrow's Jobs are based upon input from the 10 regional seminars and insights gained in the summarization, analysis, and reporting of the seminars.

- The U.S. Department of Education further promote dissemination and discussion of the recommendations of
    - the National Academy of Sciences committee report
    - the report of the 10 regional seminars and
    - the High School Study Commission Report

  by encouraging seminars to be jointly planned within each of the States and Territories

- Further studies be conducted directed toward the clarification of the goals of vocational education in the public comprehensive high school

- Studies be conducted regarding design, development, and implementation of curricula alternatives directed toward broadening the occupational base of comprehensive high school students

- Major educational research and development efforts be encouraged for the purpose of strengthening and reinforcing basic skills education in the middle grades and strengthening occupational exploration at this level

- The findings, issues, strategies, and recommendations of this report be considered by the High School Study Commission

- Regular occupational internships for full-time vocational teachers be required for teacher recertification and be encouraged and supported as contractual conditions between the school, the teacher, and appropriate private firms

- Vocational teacher certification criteria be modified to require periodic demonstration of both professional teaching skills and appropriate occupational skills

- Research be conducted to more precisely define appropriate career ladder levels, including master teacher concepts, within the professional role of vocational teacher and to further clarify and differentiate appropriate professional roles for part-time vocational teachers

- Research be conducted to identify effective approaches to enhance the image of vocational education with students, parents, the education community, and the community at large

- Studies of the effects and effectiveness of a system of vocational incentive grants in improving access to vocational education programs be conducted prior to any general endorsement or support of such grants and that such studies be conducted with students aged 16 and above rather than ages 14-18

- Greater flexibility be provided in vocational education funding formulas to permit and promote public education responsiveness to private sector needs for vocational training

- Federal legislation be enacted to provide tax incentives to business, industry, and labor to collaborate with public vocational education in improving the offering of appropriate and high-quality vocational programs at both high school and post-high school levels and to support studies regarding the effectiveness of these provisions

- Future regional seminars be organized on a basis of 5 or 6 regions rather than the 10 USED regions. A pattern of conferences cutting across regions could result in broader representation among large and small cities, districts and schools; higher attendance per meeting; and a greater economy of resources with approximately equal effects

CHAPTER V

SUMMARY

During the months of March and April 1984, the U.S. Department of Education held a series of 10 regional seminars based on the National Academy of Sciences report Education for Tomorrow's Jobs (1983). The purposes of these seminars, called by U.S. Secretary of Education, T. H. Bell, was to call educators, members of the private sector, and State and local government officials "to pursue with vigor and determination the Academy's recommendations for vocational education."

The major objectives of the seminars were--

- to convene influential State and local individuals who can suggest strategies that might best implement the reports findings and recommendations,
- to examine the current context of vocational education as it is being affected by this and other National education reports,
- to compile a summary of suggested implementation strategies for use at State and local levels from each regional seminar for National dissemination, and
- to encourage State and local leaders to plan and conduct follow-up seminars in their home States.

A total of 1,163 individuals participated in the seminars. Of this total, nearly one-half were associated with local secondary or postsecondary schools. Approximately one-fifth of the participants were State department of education representatives. Other participant groups, accounting for from 3-7 percent each of the total participants, were representatives of State and local vocational education advisory councils, business-industry, education associations, teacher education, other State agencies, and Federal agencies.

Seminar participants and reaction panels responded to presentations and discussed issues raised by a videotaped presentation of U.S. Secretary of Education, T. H. Bell, and by a panel of members of the National Academy of Sciences study committee. A set of questions guided discussion groups in focusing debate upon the recommendations of the NAS committee relative to excellence in vocational education, strengthening teaching, improving access to vocational programs and strengthening finance.

Summary of Issues Discussions

Regarding enhancing excellence in vocational education in the comprehensive high school, there was general agreement that--

- a dual track of academic and vocational education studies should be avoided;
- there is need to clarify the mission and goals of vocational and academic education;
- focus of vocational education programs should be broadened, using common core curricula approaches;
- mastery of basic skills must occur prior to entry into vocational education, with major emphasis in the middle grades;
- students, teachers, and administrators in specialized vocational schools tend to be more goal oriented and motivated; and
- some type of work-education experience is desirable for all students.

Regarding strengthening the teaching staff, major areas of agreement were that--

- college credit toward certification be given for vocational teacher's occupational experience;
- evidence of occupational skills and demonstrated teaching ability should be basic requirements for vocational teacher certification and recertification; and
- internships in business and industry are needed for vocational teachers, however are currently not readily available.

Regarding improving access to vocational education programs, areas of greatest agreement were that--

- improvements in curricula, occupational exploration, counselling, student basic skills, program planning, and quality of educational staff are needed to improve student access to high-quality vocational education;
- vocational incentive grants are not an appropriate means of improving access for 14- to 18-year-old students; and
- if vocational incentive grants were to be implemented, there would be need for accreditation of training institutions.

Regarding strengthening financing for vocational education, the most frequently voiced concerns were--

- long-range programs of Federal funding for updating vocational buildings and equipment, and
- greater flexibility in the use of funds to meet unique local and State needs.

Other current reform issues needing attention regarding strengthening teaching were the recruitment and retention of qualified vocational teachers and coordination among teacher education institutions. Regarding improvement of access, other issues included the need to devote greater attention to inservice, upgrading current workers, the preparation of nontraditional students, the Congress' perception of the role of vocational education, integration of vocational education into secondary education, and the identification of other options for improving access. Issues identified in strengthening financing related to the need for greater flexibility in basic vocational education program funding and labor market needs versus student individual needs as a basis for vocational education program planning and funding.

Strategies Identified

Several strategies were identified relative to strengthening teaching, improving access, and strengthening financing of vocational education. These included--

- required and supported business-industry internships for vocational teachers;
- establishment of incentives, such as career ladders, to attract and retain qualified teachers;
- establishment of State collaboration councils to promote voluntary sharing of resources for vocational education;
- establishment of "employment insurance" as a companion with unemployment insurance;
- modification of high school graduation requirements from a course basis to a competency basis;

- tax credits to business and industry for teacher and student internships and for provision of personnel and equipment for vocational education purposes; and
- several specific collaborative approaches for training students considered difficult to place.

Recommendations

Resulting from this effort were recommendations for studies regarding clarification of the goals of vocational education at the secondary level, development of common-core curricula for high school vocational education, defining appropriate career ladder levels for vocational teachers, identifying effective approaches for enhancing the image of vocational education, studying the effects of vocational incentive grants for students aged 16 and above, and strengthening and reinforcing basic skills education in the middle grades.

Recommendations included required business-industry internships for vocational teachers, modification of teacher certification criteria, tax incentives for business-industry-labor to collaborate with public vocational education, increased flexibility in vocational education funding, and continued support of discussion of these issues and strategies through similar seminars within each State.

Appendix A

Schedule for Regional Seminars
Education for Tomorrow's Jobs

Appendix A

Schedule for Regional Seminars

EDUCATION FOR TOMORROW'S JOBS

Region I	March 21	Assabet Valley Regional Vocational School Fitchburg Street Marlborough, Massachusetts 01752
Region II	April 6	Fashion Institute of Technology 227 West 27th Street New York, New York 10001
Region III	March 27	Sheraton National Hotel Columbia Pike and Washington Blvd. Arlington, Virginia
Region IV	March 28	Atlanta Area Vocational Technical School 1560 Stewart Avenue, S.W. Atlanta, Georgia
Region V	April 12	Bismark Hotel 171 West Randolph Chicago, Illinois
Region VI	April 6	Francis Tuttle Voc-Tech School 12777 North Rockwell Oklahoma City, Oklahoma
Region VII	April 5	Kansas City Technical Center 1215 Truman Road Kansas City, Missouri 64106
Region VIII	April 10	The Regency 3900 Elati Street Denver, Colorado 80216
Region IX	April 13	Southern Nevada Vocational Technical Center 5710 Mountain Vista Drive Las Vegas, Nevada 89121
Region X	April 12	Portland Community College Rock Creek Campus 17705 N.W. Springville Road Portland, Oregon 97229

Appendix B

Education for Tomorrow's Jobs
Typical Agenda

Typical Agenda

9:00 - 9:30	Registration
9:30	Call to order/announcements - Secretary's Regional Representative
	Introductions
	Comments, Regional Vice President, NASDVE
10:00	Presentation, Assistant Secretary, OVAE
10:30	Coffee
10:45	Address - U.S. Secretary of Education Presentation - National Academy of Sciences
11:15	Reactors ________________private sector ________________state legislative rep.
12:00	Introduction to afternoon activities, Regional Vice President, NASDVE
12:15	Lunch Break (on your own)
1:30	Reconvene in three* breakout groups
	Discussions on State and local strategies for: Program Access, Program Finance, Teaching and Collaboration
3:00	Refreshment Break
3:15	Reconvene to hear group reports and closing observations
4:00	Seminar Adjourns

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* Discussion leaders and recorders for each

Appendix C

Recorders for the Regional Seminars on Education For Tomorrow's Jobs

Recorders for the Regional Seminars on Education for Tomorrow's Jobs

Region I

Robert B. Borden
John Boulmetis
Lawrence Creedon
Fredrick St.Cyre

Region II

Doris Belton
Helen Branigan
Linda Celeone
Ken DeCerce
Millie Frandino
David Gillette
Charles Graber
Ann Marie Haase
Kate Hull
Lois Matheson

Region III

Maude P. Goldston
William A. Matz
Frances P. Waters

Region IV

James F. Clark
Travis A. Cliett
Harriette E. Cox

Region V

Andrew M. Adaska
Robert Babcock
Donna Bauer
Barbara Buckbee
Audrey M. Finn
Ardis Harnagel
Richard Heckman
Carol A. Hodgson
Robert G. Johnson
Barbara Murphy
Thomas F. Swoik
Ben Winslow

Region VI

R. L. Beaty
Janie Ponthieux
Kay Rogers
J. W. Weatherford

Region VII

Edward E. Closson
Jessie L. Hudson
Mary Sherer

Region VIII

Gene Christiaansen
Davis S. Gailey
Reuben Guenther

Region IX

Louis Chacon
Roz Parry
Myrna Matranga
Michael Rask
JoAnn Sheerin

Region X

Nita Crimins
Emma Gebo
Larry McClure
Mel Streeter
Hartley Trofgruben
Darrell Ward

Appendix D

Transcription of Videotape Presentation at the Regional Seminars

T. H. Bell, Secretary
U.S. Department of Education

Before sharing with you some of my thoughts on the carefully considered recommendations contained in the National Academy of Sciences report, I want to emphasize how important a task we are performing today, and how pleased I am to have the opportunity to talk with you about it.

The National Academy of Sciences report is an excellent study and has the potential to be a landmark study for vocational education, if all of us--educators and representatives of the private sector, alike--pursue its recommendatinos with vigor and determination. As you know, the National Commission on Excellence in Education issued its widely discussed report this past April. What that report is doing for education, generally, this National Academy of Sciences report can do for vocational education, specifically.

There should be no question that--while elements, techniques, and approaches of vocational education must be "melded" with academic subjects --there are many other parts of vocational education that complement and extend the academic disciplines, from the student's point of view, and are not merely components of a general educational approach. President Reagan made the following statement at the Vocational Industrial Clubs of America's National Skills Olympics in Louisville, Kentucky, this past summer --

> We should see that all our young people get a good grounding in English and literature, history, math, science, and other basics. But we must also recognize that our vocational classrooms are just as important as any other. And we should insist that the vocational courses we teach prepare this generation with the skills they need for real jobs.

There are many reasons why vocational education is seen as especially important at this time in our Nation's history--and why this report of the National Academy of Sciences is so timely. There are two that immediately come to mind--

First, any branch of American education that enrolls more that 16 million persons (about five-eighths of whom are secondary level students), and which has an annual budget ranging well over 7 billion dollars, must command a great deal of attention. We can't afford to watch it drift into obsolescence, or permit it to operate at anything less than peak efficiency and productiveness . . . not only because of the services it renders to business and industry, but also because it is a major, integral component of the American education system, both public and private.

Second, as we have all read and heard, our Nation faces a massive training and retraining task in order to recapture its preeminent position in the worldwide economy. At no previous time since we became a financial and industrial power have we faced so many well-trained and innovative economic competitors. At the same time, the pace of technological change is accelerating, and we must adjust to far-reaching shifts in the demographic composition of our work force. Vocational education is a major supplier of skilled workers to American business and industry; and, as these clients change, so too must it change. The question implicitly posed by Education for Tomorrow's Jobs is: Can and will it adapt to these many changes, so as to ready itself to perform the tasks the Nation expects it to perform?

As one author states, vocational education is moving toward more flexible training programs; continuously revised technical skill content; more emphasis on entrepreneurship skills; more industry-based instruction (especially for adults); more up-to-date equipment being utilized for technical skill training; increased emphasis on retraining for adults; continuous updating of instructors' technical skills; and devoting a greater proportion of Federal dollars to program improvement.

As you discuss the very practical problems and recommendations contained in Education for Tomorrow's Jobs, remember that you are not dealing with a static enterprise, waiting to be energized; but, rather, you are dealing with a very diverse, dynamic set of institutions that already see themselves at a crucial crossroads and are struggling to adjust according to their own needs and abilities.

Some persons have a tendency to think of vocational education in overly simplistic terms. What we are talking about are roughly 19,000 institutions (if we do not count about 6,000 private or proprietary schools and colleges) located in almost every city, hamlet, and region of the Nation. They range from essentially academic institutions offering a few vocational options or evening adult courses, to technical institutes or education programs of great variety. Not only do these institutions' programs vary widely, but so do their admissions policies, graduation requirements, governance arrangements, funding mechanisms, relationships with business and industry, student clienteles, and almost anything you might care to name.

Still another major kind of variation is that of quality. You can go into almost any State and find the full gamut of quality--from poor to excellent. For this reason, drawing conclusions about specific pieces of the enterprise, from a National vantage point, using National averages, is very chancy business. This not only implies that the practical work of program improvement can only be planned and undertaken successfully at the State and local levels, but also that we must always validate, at the local level, the applicability of National data and of analysis using such data.

These are some of the issues I see as important for vocational education in the next few years.

First, is it a fact that the "trouble spot" in vocational education is the comprehensive high school? If we are sure of this assertion, then we had better start doing something about this deficiency, since the great majority of those 19,000 institutions I referred to are comprehensive high schools.

Second, is it a fact that separate vocational institutions manage, on the whole, to offer superior programs? If so, then this strongly suggests to me that we must do a much more thorough and objective job of analyzing why this type of institution can offer strong programs while others seem to be at a disadvantage.

Third, is it a fact that the newer and better vocational schools, particularly of the area or regional variety, are located primarily in the well-to-do suburbs and not in the inner cities or the sparsely populated rural areas? If this is so, then we had better target our efforts on improving programs in those locations--because this is also where the disadvantaged, the minorities, and the unemployed live; and these persons count for just as much as those living in more affluent communities.

Fourth, is it a fact that the vocational education programs showing the greatest "return on investment," both to students and employers, are those in postsecondary institutions? And, does this necessarily mean we should forget about, or at least deemphasize, secondary-level vocational education? I cannot help but wonder about the effects of such a decision on those millions of secondary students who go directly from school to work and never see a postsecondary institution; or those whose secondary-level exposure to a variety of possible careers has enabled them to make more intelligent life choices; or those who learned good citizenship and leadership through our secondary-level vocational student organizations. How do we place a value on these returns?

Let me turn now to the report itself.

I hope that your deliberations will focus on those topics that comprise vocational education program improvement. These are the areas that count; the rest will be decided by the political and legislative processes.

Before I comment on some of the topics that the report includes under the heading of "program improvement," let me add another topic to which I hope you will direct your efforts: building a stronger partnership between vocational education and business, industry, and labor. To me and to President Reagan, private sector involvement is so important as to be automatically included in the discussion of any public enterprise.

As Education for Tomorrow's Jobs points out, a major problem that must be faced by vocational education is that of skilled and effective personnel--not only instructors, but also administrators and leaders.

To my knowledge, no comprehensive study has recently been performed on this critical set of problems in vocational education. However, I understand that--particularly at the secondary-school level, where certification requirements and salary scales are more rigid--attracting qualified instructors into many vocational programs, and retaining them in those programs, is becoming a severe problem. As the Nation's economy continues to improve, and as noneducational competition for these skilled instructors intensifies, I am quite sure this problem will become critical--unless we can summon up more imagination and determination in attempting to solve it. For example--

> What might be the "best case" that could be made for moderating State or local certification requirements at the secondary level, given the knowledge that there were (and probably still are) very good reasons for protecting the professionalism of the American teacher?--for instance, to allow teachers from private business and industry to staff programs, as is more usually the case in postsecondary education. And how might we introduce, and should we introduce, a special merit-pay system for vocational instructors, as is now being proposed for teachers of mathematics and the sciences?

The problem of developing administrators for vocational education is less well recognized, except from within the field of vocational education. "New blood" and "fresh perspectives" are desirable, but it has been my impression that those who have not worked in some part of the vocational education endeavor or in some type of skills training are likely not to understand what it is all about, or even value it very highly. I have been told that at least one-third of the current State directors of vocational education have been on the job less than 3 years. I must ask: Is this a real problem? And if so, how might we best correct it?

In the case of administrators and leaders, perhaps we should begin to till new fields--for example, the ranks of private business and industry. If this is a valuable and logical source for new vocational instructors, then why not for other positions in vocational education?

My purpose in bringing up the vocational administrator and leadership issues is not to distract you from the topic of teachers, but to point out that vocational education's personnel needs to encompass more than instructional staff alone.

Another aspect of program improvement is that of "access," or what is more descriptively termed "equal education opportunity." The question of "access," as it affects vocational education, is partly one of raising the quality of programs wherever they may be. The use of vocational institutions as "magnet" schools is another idea that has shown promise. Another part of the problem centers around stereotypes that traditionally dissuade segments of the population--for example, minorities and women--from even attempting to enter certain occupations, and various kinds of barriers that prevent handicapped persons from entering them. One approach involves recruiting and training more minorities, women, and handicapped persons for jobs as vocational instructors--not only for reasons of equity but so that they might serve as "role models" for prospective students who are currently underrepresented in vocational education programs.

One thing is relatively sure--vocational education must address and solve these "access problems." Since the demographers tell us that, while the overall pool of new work force entrants will shrink during the coming decade, greater proportions will consist of the special populations we have been discussing. They must be trained, not only out of fairness, but also for our Nation's economic health.

I was particularly pleased to note that one of the National Academy of Sciences report's suggestions toward solving the "access problem" is the use of "vocational incentive grants." These grants would have certain similarities to both tuition tax credits and education vouchers--both of which have been proposed and strongly supported by this administration. I hope you will look at all three of these approaches as you consider ways to increase access to quality vocational education.

There is still another area I urge you to consider when thinking about the future of vocational education. While it is not, strictly speaking, an issue in or a problem of vocational education, it is a development that must radically change the face of all education in the years to come--and is an area to which we are devoting considerable resources in the Department of Education. I refer to recent advances in educational technology, spurred by the so-called communications revolution. Electronic aids such as computers and their networks, closed-circuit television, videotapes and discs, and cable television may not only provide solutions to problems but may even necessitate their redefinition. The sharp lines we have traditionally drawn between school and home and school and the workplace, and even workplace and home, are rapidly being blurred. In a short time, there may literally be no boundaries on what we call education--and I hope that you will pause to consider what this will mean for education and training.

This administration's position on vocational education--as an important part of both education and training for employment --is that we believe that it is needed by the Nation; we believe that it is working; and, we support it. On the other hand, this administration is firmly committed to the proposition that vocational education is the responsibility of the States and local communities; it is not a federally operated or directed program. We believe the States and localities must have the freedom and flexibility to develop their own solutions to their own problems. We also believe that the needs of vocational education can only be met by bringing the private sector into full partnership with public agencies, in support of the program.

One of the Department's top priorities for the current year is to make full use of the work accomplished by the National Academy of Sciences on behalf of vocational education. Regional seminars such as this one can be a vital spur toward improving vocational education. It is our hope that similar seminars will follow, at the State and local levels.

In conclusion, I again want to emphasize the importance of your work during these regional seminars. Illinois Governor Jim Thompson, who is the new chairman of the National Governors' Association, recently stated that, "Improving job training programs is crucial to the Nation's economic turnaround. There will be no economic recovery unless we have trained workers necessary to rebuild the economy." In the final words of Education for Tomorrow's Jobs, the National Academy of Sciences emphasized the other aspect of your task--

> We would like to see vocational education become an equal partner with college preparatory education in the education system as a whole. The most effective vocational programs are deserving of that respect now, and we would like to see all programs raised to that level of quality and esteem.

I strongly subscribe to both of these statements and therefore wish you every success in responding to these dual charges, both today and in the future. You may be assured of my full support, as well as that of the Department of Education.

Thank you.

Appendix E

Remarks by Dr. Robert M. Worthington on Education for Tomorrow's Jobs

It is indeed a pleasure to participate in this National series of regional seminars on "Education for Tomorrow's Jobs." These seminars are being made possible by the collaboration of many National organizations and their State and local counterparts. Among these groups are the National Association of State Directors for Vocational Education, the State Advisory Councils for Vocational Education, and our own regional offices of the U.S. Department of Education headed by Secretary Terrell H. Bell's representatives.

The planners of these seminars have invited the most knowledgeable persons who might bring to these discussions their experience, their insights, and their convictions on what ought to be done to improve education for tomorrow's jobs. It seems to me that the expectations of the planners have been more than realized in this respect. Each of you has been identified by National or State leaders to receive invitations from Secretary Bell who, along with me, called for these seminars as a means of focusing attention on vocational education as part of the necessary reform for improving the quality of all American education. It is the purpose of my remarks to set the stage for the video presentations by the National Academy of Sciences study team. I wish to highlight various issues and conditions that will affect not only the continuation of programs of vocational education, but will influence their destiny irrespective of the outcomes of this seminar. In recognizing these issues, we can be certain that our strategies will in fact be reasonable and timely for the needs of this decade and beyond.

The study undertaken by the National Academy of Sciences can be structured in four areas of concern:

- Access
- Teaching
- Financing
- Collaboration with the private sector

With the broad delineation of major areas of concern, the focus and the ultimate purpose of this seminar is to identify plausible strategies to improve the availability and quality of vocational education at State and local levels. As we contemplate this purpose, let me mention a few activities in which collaborators in this venture are involved.

The Office of Vocational and Adult Education has contracted with the National Center for Research in Vocational Education in

Columbus, Ohio, to perform two major services at each seminar. The first is to compile and provide for your perusal a variety of materials and literature that pertain to one or more of the National Academy of Sciences report's recommendations and findings. Second, the National Center has been asked to provide guidance to the discussion leaders and recorders, and then to use the resulting information to prepare proceedings that include a National summary of the strategies and recommendations made by the participants in all the seminars. (These proceedings will be available soon after the conclusion of the final seminar.)

Now let me turn to a number of major factors that will influence our deliberations and the future of vocational education. First is the changing demography of America. For the first time in the history of the United States, there are more people 65 and over in the population than there are teenagers. By the end of this decade, there will be over 30 million such individuals over 65 compared to approximately 23 million teenagers. These statistics show the influence of declining birthrates and the impact of better, more readily available health care to our entire population. Although these shifts in the age of our population have affected and will continue to affect the entire society, they certainly will have an impact upon the labor market.

As we reach the end of this decade, the military, other employers, and educational institutions will all vie for the relatively small number of youth who will be entering their postteen years.

Second is the changing role of women in the U.S. labor force and the economy. Women are taking their rightful place in various endeavors in our economy--in law, medicine, education, politics, and management. We still have much progress to make to make certain that all women are given an equal opportunity to obtain an education and a job, but we have made dramatic progress in the recent past. Today, over 66 percent of the women between 25 and 45 are employed. Just 30 years ago, less than a third of the female population held jobs outside of the home. It seems quite obvious to me, and I know it must to you, that in our deliberations concerning the future of vocational education and "Education for Tomorrow's Jobs," we must consider all implications of women's participation in our labor force and guarantee for them opportunities to prepare for and succeed in their chosen careers.

Third is the impact of high technology in our lives. Perhaps the most easily understood symbol of high technology is the computer. Computers are influencing our lives whether we know how to use them or not. Whether in video games or automobiles, copying machines or microwave ovens, electronic memory chips are applying computing power to services, mechanisms, machines, and the handling of information. Much could be said about the influx of these technologies in various aspects of our lives, but for our purpose here, we simply recognize the continuing march of progress that will affect jobs, where those jobs are located, and how we meet job requirements. However, we should be cautious as we consider the influence of high technology on the labor force composition. The U.S. Bureau of Labor Statistics believes that only about 6.6 percent of our jobs will actually require highly complex high-tech skills and knowledge by the end of the century. The largest number of new jobs in America will occur in the service economy. Economist Russell Rumberger of Stanford University believes that one-third of the new jobs during the 1980s will occur in 20 occupations but only two will require a 4-year college degree (elementary school teaching and accounting).

Fourth is the increasing significance of minorities in our Nation, many of whom are academically and economically disadvantaged. Within the last few years, our Nation has observed dramatic increase in the influence and importance of minorities. Included here are blacks and the progress they have made, Chinese-Americans, Japanese-Americans and other Asian groups, or Mexican-Americans and other Hispanics. Virtually all States have been significantly affected by the changes minorities have brought to this Nation. The needs and challenges presented by minorities in education and jobs must factor significantly in today's deliberations.

Fifth is the resurgence of interest in education in all sectors of America. Since 1982, there have been more than 10 major reports on education. The most significant of these in terms of stimulative discussion has been the National Commission on Excellence report A Nation at Risk: The Imperative for Education Reform. We believe the vocational education report we are discussing at this seminar can be just as significant. Several of the reports at least mention the preparation of individuals for employment. Although there certainly is no agreement as to the methodology needed for successful preparation of youth and adults for employment, all reports are uniform in their endorsement of the need for adequate preparation of entrants into our labor force to meet the needs of the economy.

A final point I would like to make deals with Federal legislation for vocational education. As you know the Vocational Education Act of 1963 has been extended for several years and is now undergoing a complete reexamination by Congress. The House of Representatives has already voted out its measure and is waiting at this moment for the Senate to conclude its work. The administration has made recommendations of its own which have been considered by the various committees during the development of legislation. Whatever the outcome, the difference is really one of degree, in that the Senate seems to be leaning more toward focusing the Federal resources, small as they are in comparison to state and local appropriations for vocational education, on the populations at risk, whereas the House, in sum, can be said to support the improvement of vocational education in all areas and for all population groups. The latter is less of a change from the current authority than what either the administration or the Senate is recommending.

It is not my purpose here to analyze these various factors and to isolate for you within them matters that should be discussed here today. It is only my purpose to highlight the larger parameter in which vocational education now exists and in which it will function in the future. You will see these factors and influences mentioned throughout the videotape presentations as well as in the report itself.

Just one final comment before we hear the National Academy presentation. We began our examination of issues and recommendations in the National Forum. Even this regional seminar is considered an interim step in turning words into practice. The focus of this seminar is on State and local strategies for improving vocational education in the four areas addressed in the NAS report. In the final analysis, not until each State, with its local representatives, develops a plan of action will the efforts made begin to result in actual change. All of our efforts are directed to achieving that objective. It is hoped that these thoughts set the stage for the viewing of the videotaped discussion by some of the National Academy of Sciences study team.

I want to make several brief comments before we see the Secretary's presentation. The Secretary is, of course, well known by each of you. No other Secretary or Commissioner of Education has done so much to direct the attention of the Nation to the need for increasing quality in our public schools. Soon after the National Academy of Sciences presented its findings to the Secretary, I asked to hold a National forum in Washington, D.C., to examine the report and consider its recommendations. He addressed that meeting held at the National Academy on November 7, 1983. In his presentation there, the Secretary sugested that our office make plans to conduct these seminars across the Nation. The Secretary would much prefer being here in person, but as you know, Congress is now in session and matters of legislation and budget made it necessary for him to be presented via videotape instead.

By what ever medium chosen, his message is clear. Vocational education needs the same attention as is being focused on academic education. Let us now turn to his presentation.

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